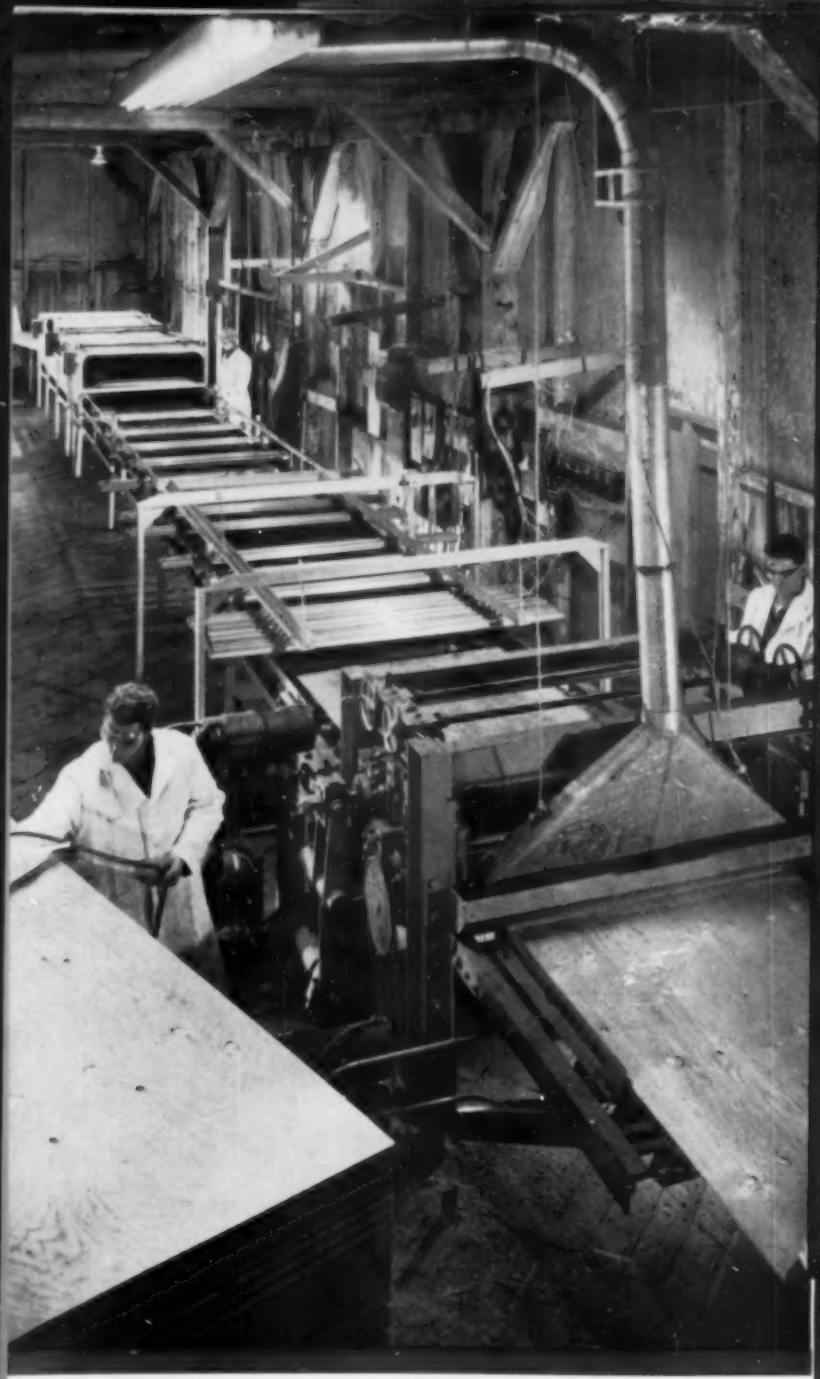


MARCH, 1956

WOOD and Wood Products

THE NATIONAL MANAGEMENT AND PRODUCTION MAGAZINE OF THE WOOD INDUSTRY

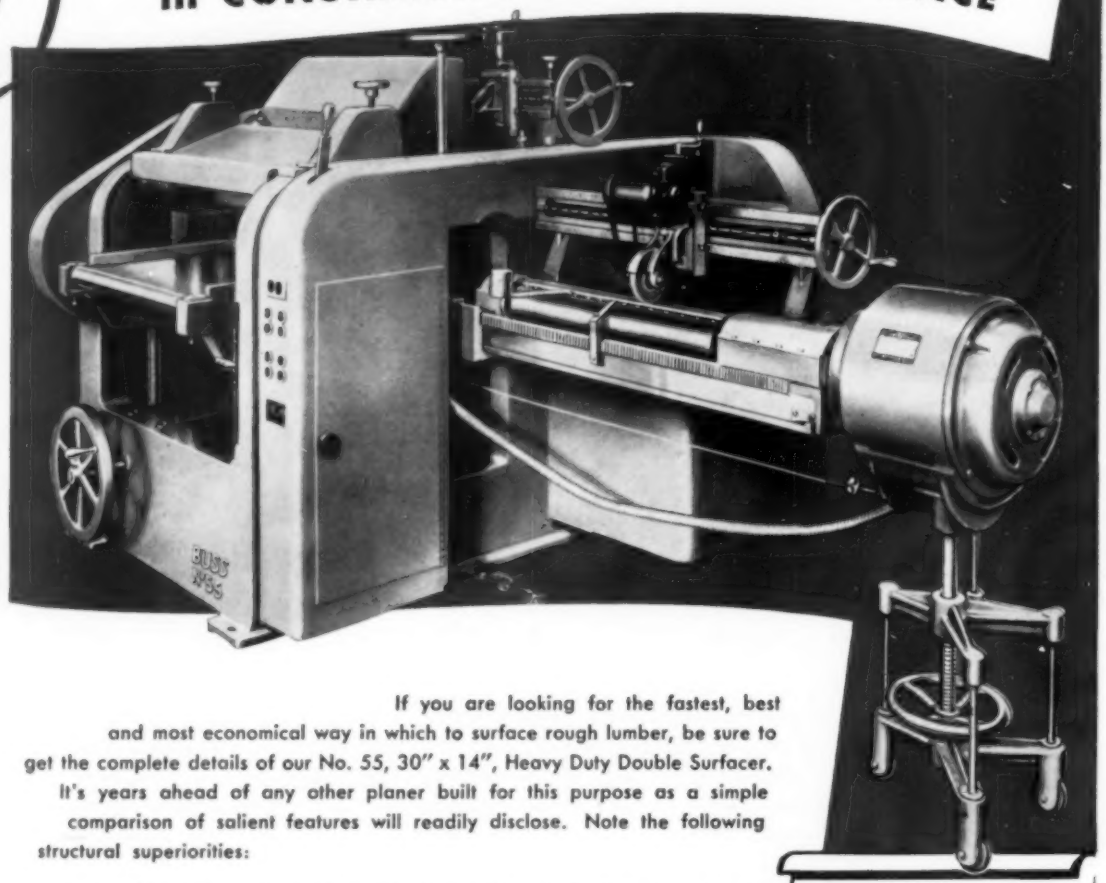
A Vance PUBLICATION

FEATURES IN THIS ISSUE

- Machine Performs Plastic Surgery on Plywood
- Increasing Rough Mill Material Utilization
- Plan Safety to Control Injury Causes
- Successful Management Depends on 3 Essentials
- Trends—Production Line—Foreign Woods—New Products

WOOD SALUTES
Clay Brown

for DOUBLE SURFACING ROUGH LUMBER the BUSS No. 55 is YEARS AHEAD in CONSTRUCTION and PERFORMANCE



If you are looking for the fastest, best and most economical way in which to surface rough lumber, be sure to get the complete details of our No. 55, 30" x 14", Heavy Duty Double Surfacer. It's years ahead of any other planer built for this purpose as a simple comparison of salient features will readily disclose. Note the following structural superiorities:

1. Variable feed — from 30 to 175 ft. per minute. 2. Chromium plated beds and bars — for longer wear. 3. Heavy built-in grinders and jointers. 4. Anti-friction ball and roller bearings throughout. 5. Sectional feed roll and chipbreaker. 6. Large diameter cutterheads with high-speed TUNGSTEN knives for longer wear and smoother finish. 7. Completely motorized with push-button control. 8. Shearing Bar to prevent damage from loose knots. 9. ONE-SHOT lubrication for smooth running and insurance against neglected parts. Write for complete description. Ask for bulletin 55.

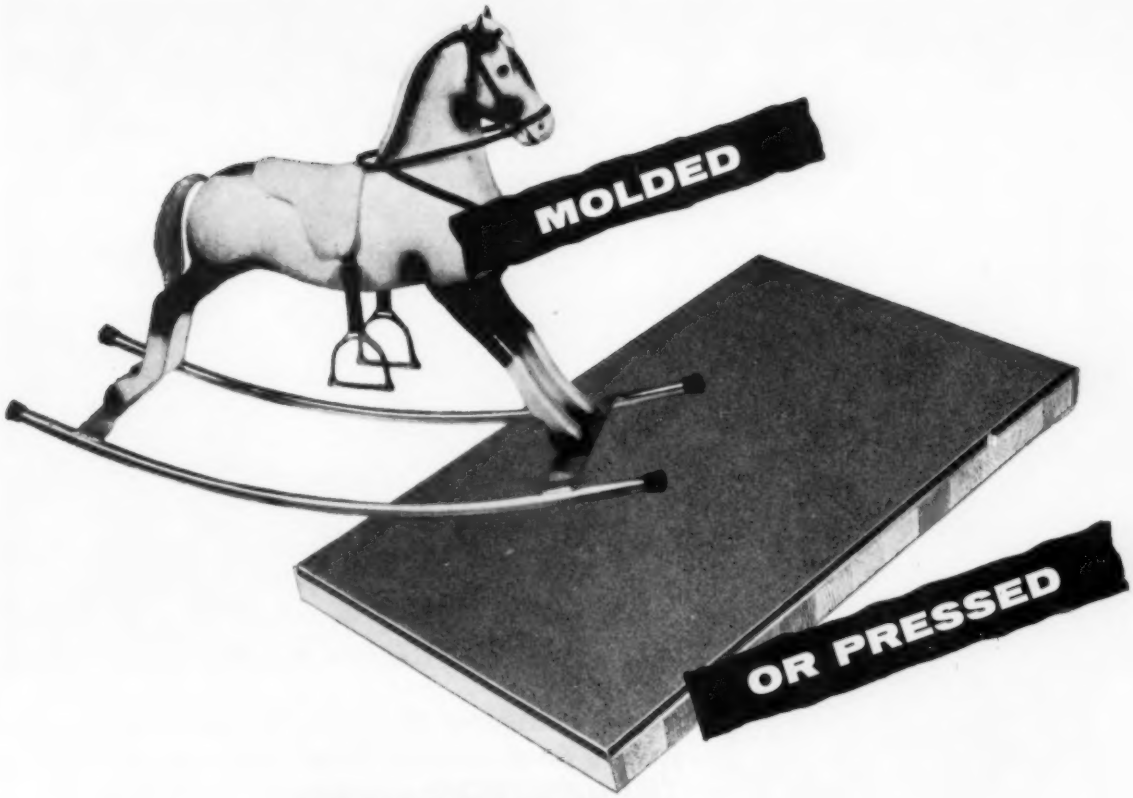
FLOORING MILLS and KINDRED PLANTS

No. 55 is also available in 20-inch width with speed stepped up to 275 ft. per minute. This model has proved itself a "bear-cat" for Flooring Mills and similar operations. Let us tell you about it.

BUSS
SINCE 1862
MACHINE WORKS

PLANER SPECIALISTS EXCLUSIVELY

244 EIGHTH STREET
HOLLAND, MICHIGAN



Today's **PROFITS FROM** *yesterday's* **WASTE**

...with **DUREZ** *Phenolic Resins*

Molded articles and pressed board made of wood particles bonded with Durez phenolic resins have opened up profitable new uses for wood material previously wasted.

Particle board can be made with these resins in a variety of densities, strengths, hardnesses, and other mechanical properties, and in various thicknesses. It can be machined or worked readily with ordinary equipment. Toys, household articles, toilet seats, and chair backs and bottoms suggest the broad commercial markets open to compression molded wood products.

Supplied in powdered form, Durez wood-bonding resins offer maximum ease in processing. When cured or solidified they exhibit physical properties that are suitable for these numerous end-products.

If you are inquiring into the profitability of particle wood in your operations, or are already producing it, we can help you. Qualified field experts, backed by our long experience in research and development, are available for consultation.

DUREZ®

Phenolic Resins for the Wood Industry

DUREZ PLASTICS DIVISION

HOOKER ELECTROCHEMICAL COMPANY
303 WALCK ROAD, NORTH TONAWANDA, N. Y.

HOOKER® CHEMICALS & PLASTICS

Thermatron bonded panels 120" x 10" come from the press at Bally Block Co. in three minutes—yet the old method required at least three hours just for the glue to set. Then each hand clamp had to be loosened to remove the panels. Incidentally, the space needed to handle the seven short panels shown in the bottom picture is just about the space taken up by the new Thermatron electronic equipment which gives many times more production.

Edge Bonding at Bally Block Co. now a fast, streamlined operation with THERMATRON electronic equipment

Bally Block Co., Bally, Pa., required volume production of edge bonded panels—which they get now with their powerful new 20 KW Thermatron radio frequency generator and hydraulic press installation.

The equipment easily accommodates stock 6 inches thick and 8 feet long, while longer panels are handled progressively. Once fed into the press, they receive an electronic "jolt" and the bond becomes stronger than the wood itself.

There's an extra, too. Bally Block found that large storage areas once given over to glue drying are now released for production instead. This gives them far more payload per factory foot.

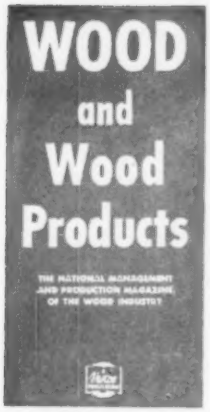
Let us show you without obligation how modern methods can speed *your* wood bonding operation and achieve vast savings. Thermatron equipment is available up to 300 KW in all degrees of automation to suit your special purpose. Please request a copy of our latest bulletin W-11.

Thermatron®

Thermatron Division **RADIO RECEPTOR COMPANY, INC.**
In Radio and Electronics Since 1922

SALES OFFICES: 251 West 19th Street, New York 11, N. Y., WAtkins 4-3633 • Chicago: 2753 West North Ave.
Factories in Brooklyn, N. Y.

RADIO RECEPTOR PRODUCTS FOR INDUSTRY AND GOVERNMENT: SELENIUM RECTIFIERS • GERMANIUM DIODES
THERMATRON DIELECTRIC HEATING GENERATORS & PRESSES • COMMUNICATIONS, RADAR & NAVIGATION EQUIPMENT



MARCH, 1956

Vol. 61, No. 3

Herbert A. Vance.....Publisher
J. F. Koellisch.....Editor and Manager
Hoyt Hurst.....Managing Editor
Elizabeth Tarpley.....Assistant Editor
Donald O. Carlson.....Eastern Editor
Dexter W. Johnson.....Western Editor
R. Y. Kerr.....Washington Editor
Elmer Olin.....Circulation Manager
Jo Ann Brooks.....Reader Service

FURNITURE

How to Increase Rough Mill Material Utilization 20
Elevator and Conveyor Aid Cutoff Saw Operation 25

MANAGEMENT

Successful Management Depends on 3 Essentials 22

BOAT BUILDING

How Portable Power Tools Aid Production Line Efficiency 23

PRODUCTION

4 Production Time Savers 24

LUMBER AND PLYWOOD

New Process Performs Plastic Surgery on Plywood 26
Lumber and Plywood Scale New Heights in Construction.....34

MILLWORK

New Machines, Methods Speed Sash and Screen Door Production 24

MARKETING

How to Make Salable Paneling from Low-Grade Hardwood.....30

SAFETY

A Safety Plan That Controls Potential Causes of Injury.....32

DEPARTMENTS AND NEWS

Industry News and Trends 7
Coming Events 10
Wood Puzzlers 12
Letters to the Editor 16
Editorial 19
Foreign Woods 38
New and Improved Products.....40
New Catalogs and Literature.....54
Along the Production Line 68
Names and Events 72
Trading Post 80
Wood Salutes 82

District Representatives:

Central—Robert F. DeFreitas, 139 N. Clark St., Chicago 2, Ill., Financial 6-5380
Midwest—Robert O. Bormann, 139 N. Clark St., Chicago 2, Ill., Financial 6-5380
East—Jerry Regan, 2034 Grand Central Terminal Bldg., New York 17, N. Y., MUrray Hill 3-8333
West Coast—Charles W. Hoefer, 1664 Emerson St., Palo Alto, Calif., DAvenport 4-2661

Published monthly at 1309 N. Main St., Pontiac, Ill. with Executive and Editorial offices at 139 N. Clark St., Chicago 2, Ill., by Vance Publishing Corp. OFFICERS: Herbert A. Vance, president and treasurer; Arthur A. Hood, vice president; A. E. Monetti, secretary. Annual subscription postage paid rate in United States, Possessions and Canada $4.00. All other countries in the Universal Postal Union $10.00. Single copies 50 cents. Copies of issues prior to current year, if available, $1 each. In changing address, give old as well as new address. Note: each subscriber receives a mail notice from the publishers in advance of the expiration of subscription. Established 1896. Entered as second class matter, November 7, 1951, at the Post Office, Pontiac, Illinois, under the act of March 3, 1879. Copyright 1956 Vance Publishing Corp.

JUST OFF THE PRESS!

CHIPBOARD from WOOD WASTE

New Booklet Answers Your Questions, Describes and Illustrates Available Processes and Equipment

★

Here, at last, in one compact reference work, WOOD & WOOD PRODUCTS gives you flow charts, operating photos, technical details of a variety of installations from coast to coast. Note these featured operations:

1. **Lane Co.'s "Lanewood" Extrusion Process.**
2. **Cavalier Corp.'s "Miller Hofft" System.**
3. **Swain Industries' Hot Press Operation.**
4. **Willamette's System for Utilizing Waste from Nearby Small Mills.**
5. **Fordyce Wood Products Co.'s "Chipcraft" Installation.**
6. **Jasper-American Corp.'s "Kreibaum" Vertical Extrusion Plant.**
7. **Long-Bell's Dry Process for Making Pressed-Wood Board.**

PLUS — Economics and Applications of Wood Particle Board.

Now you can compare relative merits of different systems and equipment and see which best fits your situation—like going on a tour of seven different plants. Plus facts on amount of waste needed, costs of various methods, end-uses, other helpful data.

ORDER YOUR COPY TODAY!

$1 per copy — discounts for quantities

WOOD & WOOD PRODUCTS
139 N. Clark St., Chicago 2, Ill.

Enclosed is $..... Please forward promptly ..... copy(ies) of your new illustrated booklet, "CHIPBOARD From WOOD WASTE."
☐ Please quote price on ..... copies.

NAME_____

COMPANY_____

ADDRESS_____ ZONE____

CITY_____ STATE_____

OZAN LUMBER COMPANY

MANUFACTURERS

YELLOW PINE LUMBER

PRESCOTT, ARKANSAS

October 25, 1955

S. A. Woods Machine Company
27 Damrell St.
Boston 27, Mass.

Gentlemen:

After six months of continuous operation in our planing mill at Prescott, Arkansas, milling various grades and patterns of Arkansas Soft Pine on the new WOODS A-480M Angular Head Matcher, the performance of this machine has been most satisfactory.

Just a few of the accomplishments of this machine have been - elimination of sniped ends - smoother finish around knots and cross grain - less power consumption in feeding of stock - the possibility of improving the lower grades and upping some. It is our belief that less power is consumed in planing because of the angular or shearing cut on the cylinders.

Less lead is required in the guide as angle cutterhead serves to hold stock against the guide fence. This should tend to reduce friction as well as wear on the feed rolls. Also because of the angle of the bed plates, stock 5" and wider is continuously supported before and after the cutting on the bottom head.

We think this is a very fine machine and the new principles applied are of real value in the advanced design.

Yours very truly,

OZAN LUMBER COMPANY

President, Ozan Lumber Company
Former President, National Lumber Manufacturers Association
Former President, Southern Pine Association.

JRBemis:ve

Write us today for more information about this new Wood's A-480 M DIAGONAL PLANER and MATCHER of revolutionary design. S. A. Woods Machine Co. Boston, Mass.

VOL. 61, NO. 3

WOOD and Wood Products

THE NATIONAL MANAGEMENT AND PRODUCTION MAGAZINE OF THE WOOD INDUSTRY

MARCH, 1956

INDUSTRY NEWS... ...AND TRENDS

CONSTRUCTION

DESPITE A BUILDING BOOM in recent years only about two-fifths of all American homes are in "fair" to "good" condition. There are estimates that the home improvement business this year could total $15 million—$3 billions more than in 1955. The reason? Most of the people in the home improvement business are out to improve service and encourage a general fix-up movement in every way they can.

EASING OF FHA regulations extending maximum repayment period from 25 to 30 years should stem downward trend of new housing starts. FHA Chief Albert M. Cole recently revised his prediction of 1.2 million new housing starts for 1956 to 1.3 million. The VA expects 650,000 veterans will get G. I. loans during 1956. Non-farm home starts tapered off during the close of 1955, but the total for the year was 1,329,000.

COORDINATION and Standardization of dimensions for materials and equipment used in home building is being undertaken jointly by the National Association of Home Builders and Producer's Council, Inc. Initial efforts will be directed to the problems of standardization for door and window openings.

The program calls for establishing by mutual agreement desirable and functional dimensions for the various materials and equipment. The second step will be to encourage manufacturers to produce and builders to use these standardized products.

Low Grade Timber Finds Industrial Use

LOW GRADE TREES find industrial use in West Virginia's industrial Kanawha Valley. Here the lumber is cut into "skimmer boards" at the Webster Hardwood Lumber Co., Dixie, W. Va., for delivery to industries which use them to skim impurities from molten ferro type alloys in furnaces

FURNITURE

THE FURNITURE INDUSTRY climaxed its relentless climb during 1955 by shipping 26% more furniture in November and 23% in December than in the same months of 1954. Total shipments for 1955 were 19% more than 1954 and 11% ahead of 1953. (Industry's best previous year.)

Not once during 1955 did shipments falter in their rise toward the final +19% figure. In fact, in only one month (January) were shipments less than the same month in 1954.

Orders were even better. The industry booked 20% more orders in 1955 than in 1954. Not once during the year did total orders, or orders as compared with the same month last year drop below 1954.

Cancellations were held at a low level and were quite stable during 1955. Total cancellations for the year were 5% greater than for 1954. Total cancellations during 1955 ran as low as 8% less than 1954 and never higher than the final figure of +5%.

Casegoods shipments totaled 14% greater than for 1954 and were 4% greater than 1953. Upholstered furniture shipments were 11% greater than 1953 and 22% greater than 1954.

At the end of January 1955 table shipments were 25% under January 1954. Through a constant succession of improvements tables were able practically to reverse this situation by the end of 1955. Table shipments for 1955 were 20% better than in 1954.

Kitchen furniture shipments for the year exceeded 1954 by 15%.

Infants' furniture shipments in 1955 were 2% ahead of 1953.

PIANO SALES hit a new high last year—mounted to 170,000 units, 15% above 1954. Approximately 70% were spinets, 39% uprights and grands. Over half the units sold today are mahogany. Second most popular wood is blond oak, followed by walnut, maple and cherry.

JUVENILE FURNITURE manufacturers report the "best year ever" at the recent New York market. Major changes in design and function concept appeared in many new pieces, as producers bid for an expansion of the juvenile case goods market. Many producers upped prices 2 to 5%.

Paint sprayed cold often looks like this

Paint sprayed hot reduces fog, saves material

Telltale photos prove DeVilbiss cuts paint waste!

New Hot-Spray method creates less paint fog; saves up to 50% in material

By the application of controlled heat to the material – and spraying at far lower pressures – the new DeVilbiss Paint Heater solves the problem of spray fog, the major cause of spray-material waste. More paint reaches the surface; a heavier paint film can be attained with each application.

So, generally, one hot-sprayed coat covers better than *two or more* coats sprayed cold. Spraying time and material are often cut in half! And finishes? They dry faster, shrink less; come out glossier!

Usable for all types of products, the DeVilbiss Paint Heater can be *your* means to better finishing at lower cost. Call your DeVilbiss supplier, today, for an appraisal of your operation.

For full details, write for Folder F-286.

DeVilbiss Paint Heater permits Marinette Marine Corp., Marinette, Wisc., to effect multiple benefits in applying vinyl paints to U.S. Navy landing craft. Firm reports hot-spray system practically eliminates spray fog, objectionable fumes; allows heavier film build without sags; maintains trouble-free production rate.

FOR BETTER SERVICE, BUY

DEVILBISS

THE DEVILBISS COMPANY

Toledo 1, Ohio

Santa Clara, Calif. • Barrie, Ontario • London, England

BRANCH OFFICES IN PRINCIPAL CITIES

LUMBER

NATIONAL LUMBER PRODUCTION during 1955 totaled an estimated 39,105 million bd. ft., 7% above 1954, according to the National Lumber Manufacturers Association. This output exceeded the annual total for any of the preceding 26 years that comparable records have been maintained. Softwood production in 1955 rose 8% over 1954, while output of hardwoods increased 1%. Both lumber shipments and new orders in 1955 were 8% above 1954 totals.

During December 1955 production of lumber totaled an estimated 2,888 million bd. ft., down 7% from November 1955 and 6% below December 1954.

Softwood lumber shipments in December were 8% less than production, but new orders for softwoods were slightly above the output. For hardwoods, shipments exceeded production by 11% and new orders were also 11% more than the output.

Unfilled orders for both softwoods and hardwoods indicated a gain of 10% during December and at the end of 1955 were 6% above December 31, 1954. Gross mill stocks of lumber on December 31, 1955, totaled 8,729 million bd. ft., 5% below the end of 1954.

OAK FLOORING DEMAND in 1955 reached a new high as result of emphasis on construction in homes, together with the strong decorative trend toward exposure of more floor area.

Shipments of 1,207 million bd. ft. of hardwood flooring in the Southern and Appalachian regions were 11% greater than the previous high of 1,090 million bd. ft. in 1954. Approximately 95% of the volume was oak, the remainder consisting chiefly of hard maple, beech, birch and pecan.

LUMBER SHIPMENTS of 503 mills reporting to the National Lumber Trade Barometer were 1.3% above production for the week ended Jan. 28, 1956. In the same week new orders of these mills were 1.5% above production. Unfilled orders of the reporting mills amounted to 39% of stocks. For the reporting softwood mills, unfilled orders were equivalent to 21 days' production at the current rate, and gross stocks were equivalent to 51 days' production.

DOUGLAS FIR REGION sawmills reported the weekly average of West Coast lumber production for first five weeks of 1956 was 510,032,000 bd. ft. or 8.5% above 1955.

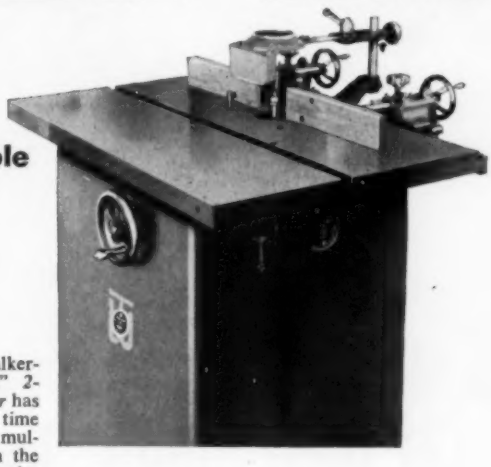
REDWOOD PRODUCTION and shipment by 20 mills reporting to the California Redwood Association during December, 1955, were: Production 42,133 M ft.; Shipments 33,603 M ft. Comparative figures for December, 1954, show a decrease in production of 436 M ft. and a decrease in shipments of 17,434 M ft.

Total production of redwood for 1955 by the reporting mills was up

"...ORDER IN THE COURT...ORDER IN THE COURT...ORDER IN THE COURT..."

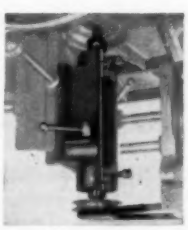
WALKER-TURNER

Interchangeable spindles cut set-up time way down!



Every feature of this new Walker-Turner "Light-Heavyweight" *2-Speed Vertical Spindle Shaper* has been designed to save you time and money. You can leave multiple cutter set-ups right on the spindle — and change the spindle in a matter of two minutes when you're changing cutting jobs. The big, clean work surface makes every job easier. Guides are independently adjustable by separate handwheels — can be easily removed when working with templates or guide pins.

Specifications: Takes W-T ¾" bore cutters, or ½" and ⅝" bore with adapters furnished . . . Spindle travels 3" on dovetailed ways; gibbed for adjustment and to take up any wear . . . Table is 22" x 33", with milled ¾" slot for miter gauge . . . Available with 1 hp single-phase or 1½ hp 3-phase motor, with big overload capacity . . . Cutter is completely guarded.



The rugged spindle is mounted on dust-sealed ball bearings 10" apart — this eliminates spindle whip. Spindle has two speeds: 7,000 and 11,000 rpm, giving you the correct speeds for different sized cutters.

Ask your W-T Distributor to *demonstrate*. He's listed under "Tools" in your phone book's Yellow Pages. Or write for his name and full specifications.

DRILL PRESSES, HAND AND POWER FEED — AIR FEED DRILL PRESS ATTACHMENT
RADIAL DRILLS — WOOD AND METAL CUTTING BAND SAWS — TILTING ARBOR SAWS
RADIAL SAWS — JIG SAWS — CUT-OFF SAWS — LATHES — SPINDLE SHAPERS
JOINTERS — BELT AND DISC SURFACERS — FLEXIBLE SHAFT MACHINES

walker-turner

WALKER-TURNER
Division
Kearney And Trecker Corporation • Plainfield, N. J.

8% over 1954 and shipments were up 11%.

Redwood orders on hand as of December 31, 1955, were 84,602 M ft. as compared with 63,664 M ft. on December 21, 1954.

Redwood stocks on hand as of December 31, 1955, were 356,299 M ft. as compared with 352,101 M ft. on December 31, 1954.

NEW LUMBER GRADING RULE 15 becomes effective March 15. It covers all Douglas fir, West Coast hemlock, western red cedar and Sitka spruce lumber produced in western Oregon, Washington and British Columbia as well as northern California.

Under the new rule the construction grades will have names instead of the old number system. No. 1 now becomes *Construction;* No. 2 will be *Standard;* No. 3 takes *Utility* name; and No. 4 is *Economy.*

VENEER

VENEER PRODUCTION in 1955 passed 1954 output by more than 10% according to final industry figures. Shipments for the year gained over '54 by an even wider margin.

African mahogany veneer output also advanced 10% in 1955, but shipments jumped 15% with the result that residual year-end inventories sank to the lowest level since 1952.

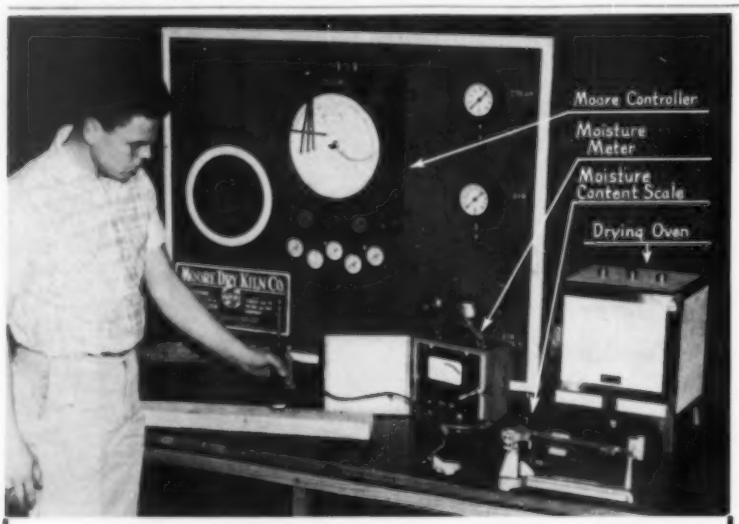
More rift white oak was shipped last year than was produced, and year-end inventories were stripped to an all time post-war low. Quartered walnut residual inventories continued downward. 1955 shipments about doubled production.

Cherry production in 1955 jumped by more than one-third. Shipments were approximately the same.

MAHOGANY LOGS are reported in short supply. Volume of shipments of the African has been unsatisfactory. Spot checks at seaports reveal that somewhat less than the usual amount of logs have been entering. The rather skimpy supply has probably resulted from a long rainy season. But the outlook for March is somewhat brighter.

FORESTRY

TREE FARM SYSTEM of private woodland management gained 4,145,946 acres in 1955—a record spurt since



Let these "tools" help your kiln operator do a better job

Here are four Moore "tools" that can place your kiln drying on a more scientific basis:

(1) Moore Moisture Meter: Shows moisture content quickly and accurately, direct from meter dial. Range of 6% to 65%.

(2) Moore Moisture Content Scale: Saves time and figuring by giving accurate, direct readings of M.C. of wafer samples.

(3) Moore Drying Oven: Designed especially for wood moisture content work.

(4) Moore Master Controller: The answer to "quality control" in kiln drying. Automatically controls drying elements.

Learn how these instruments can pave the way to more profitable seasoning. Write today.

MOORE DRY KILN COMPANY

Oldest and Largest Manufacturers of Dry Kilns and Veneer Dryers

JACKSONVILLE FLORIDA · BRAMPTON, ONT. CANADA · VANCOUVER, B. C. CANADA · NORTH PORTLAND OREGON

COMING EVENTS

Mar. 1-2: Eastern Canadian Section, FPRS. Royal York Hotel, Toronto, Ont., Canada.

Mar. 5-9: 25th short course in wood adhesives and gluing. Teco Engineering Co. laboratory, Washington, D. C.

Mar. 12-16: Hardwood Lumber Grading short course, Pennsylvania State University School of Forestry, University Park, Pa.

Mar. 15-16: Annual meeting, Southern Hardwood Producers, Inc., Roosevelt Hotel, New Orleans.

Apr. 2-6: Annual spring hardwood lumber grading short course, State University of New York College of Forestry, Syracuse.

Apr. 4-6: 41st annual convention, Southern Pine Asociation, Roosevelt Hotel, New Orleans.

Apr. 19-20: Spring meeting on synthetic wood products, Northeast Section of Forest Products Research Society, Springfield, Mass.

Apr. 25-26: 2nd Northwestern Loggers' Congress, Woodstock Inn, Woodstock, Vt.

May 2-3: Annual spring meeting, Midwest Section, FPRS, Dubuque, Iowa.

May 15-18: Annual Convention, National Plywood Distributors Assn., Colorado Springs, Colo.

June 4-7: 10th annual meeting, FPRS, Asheville, N. C.

Aug. 26-30: 28th annual convention, and Supply, Equipment & Fabric Fair, National Association of Furniture Manufacturers, Conrad Hilton Hotel, Chicago.

Let's Face It!

THERE IS NO MAGIC WAY TO MAKE OLD MACHINES NEW AGAIN

Sure they can be rebuilt to run about as well as they ever did . . . but woodworking plants operating these old machines are not making a profit now. Look in your own shop. Count the questionable machines that may be losing money for you every day.

Profitable woodworking demands high production, accurate size and low cost per piece. Modern machines have many new speed and convenience factors built into them. Modern machines provide higher production, greater accuracy, lower costs and a profit for you.

New machines attract the best help . . . modern craftsmen who use more headwork and less backwork. Are old machines keeping this best help from your door?

Put a profit in your woodworking with MODERN MACHINES

Write us regarding your machinery and manufacturing problems

WOODWORKING MACHINERY MANUFACTURERS ASSOCIATION
WMMA

Woodworking Machinery Manufacturers Association

1900 Arch Street

Philadelphia, Pennsylvania

the program was launched 15 years ago.

Certified Tree Farm acreage in 40 participating states totaled 37,838,-910 on Jan. 1 as compared to 33,692,-964 acres a year ago.

The Tree System is a program to give public recognition to private landowners who volunarily protect their woodlands from fire, insects, disease and destructive grazing, and who harvest for repeated crops.

Georgia moved into national leadership during the past year, adding 1,105,539 acres for a Jan. 1 total of 3,734,284 acres. Texas is in second place with 3,370,099 acres. Oregon is third with 3,426,792 acres; Alabama, fourth, 3,307,217 acres. Mississippi leads in the number of certified Tree Farms, 826. Texas is second with 779 and Alabama third with 578.

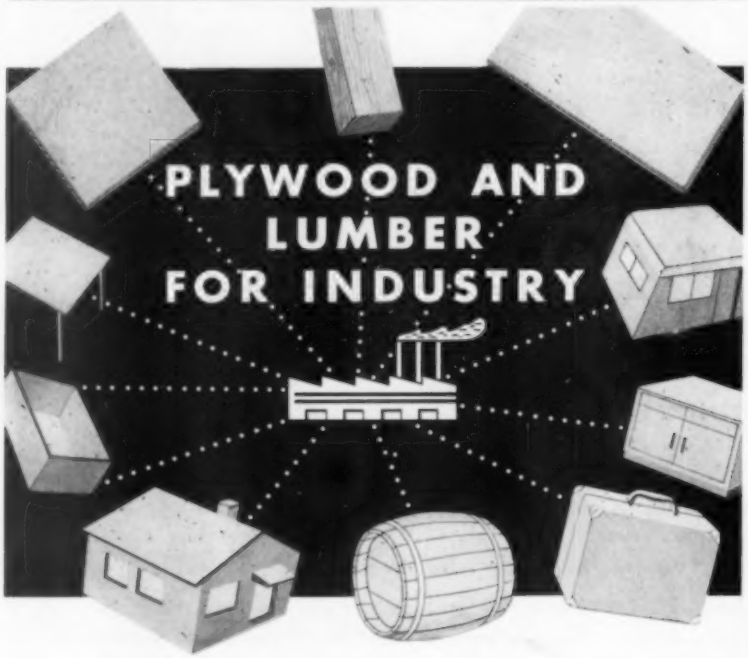
BLISTER RUST disease which attacks white pines (5-needled pines) has been checked on 17 million acres of the 23.3 million acres needing control, the U.S. Department of Agriculture announces.

Reports from field offices of the Forest Service show that 1.4 million acres received treatment during 1955 and 12.8 million wild currant and gooseberry bushes of the ribes family were destroyed. These plants are the intermediary hosts, transmitting the disease from one white pine to another. State and local agencies contributed $712,000 to the 1955 control program, an increase of $62,000 over 1954 contributions.

WOODEN CONTAINERS

APPLE BOX DEMAND during the last six months of 1955 is reported as the highest of any year since 1950. Production in the state of Washington has risen from 10 to 15% above last year's output.

Almost 80% of the 1955 crop of Pacific Northwest apples went to Eastern and Southern markets in standard nailed wooden boxes. This is approximately the same percentage as last year. The increased demand for apple boxes is nearly proportionate to this year's increased apple yield.



Speed up production — lower manufacturing costs by using Pamudo's Specialized Service for Industrial Users. Fir plywood and West Coast lumber items for furniture, containers, luggage, or even surveyor's stakes. In standard sizes or machined to your specifications. Contact our Tacoma office, branch office, or representative listed below.

PACIFIC MUTUAL DOOR COMPANY

Pamudo

Contact Industrial Specialist and Engineer, Lloyd M. Manley, 805 East Grand St., Elizabeth, N. J., or Tacoma office.

TACOMA 1, WASHINGTON OFFICE
TWX TA048 and WUX (Western Union direct wire)
Telephone MArket 4108

BRANCHES: ST. PAUL 4; KANSAS CITY 5, MO.; CHICAGO 38; BALTIMORE 31; ELIZABETH, NEW JERSEY.

WOOD PUZZLERS

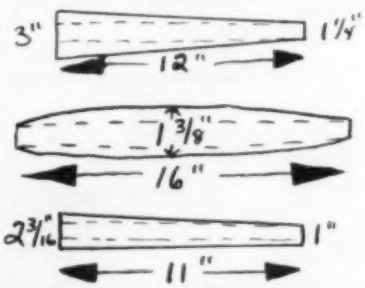
This department is designed to help find answers to your production and sales problems. Let us know what information you need. Other readers may be able to help you.—*The Editors.*

194—Brown Ash Plywood

We would greatly appreciate a list of plywood mills who can furnish a 4x8 ft.—¾-in. A-2 or A-3 grade of northern brown ash plywood. (Mo.)

195—Wants Walnut Turnings

Will you please forward names of firms able to turn solid walnut tapers? (See cut) They may be solid or 2-ply



glue-ups with a 9/16-in. hole drilled or routed throughout, sanded, and finished, if possible. Production quantities are desired. (Ill.)

Vacationing in Chicago? Be Sure to Take the Family to See the New HARDWOODS EXHIBIT Museum of Science and Industry, 57th Street and South Shore Drive

Mechanized Production Uses

MATTISON RIP SAWS, MOULDERS, AND SANDERS

In Manufacture of High Quality Bedroom Furniture of Many Styles

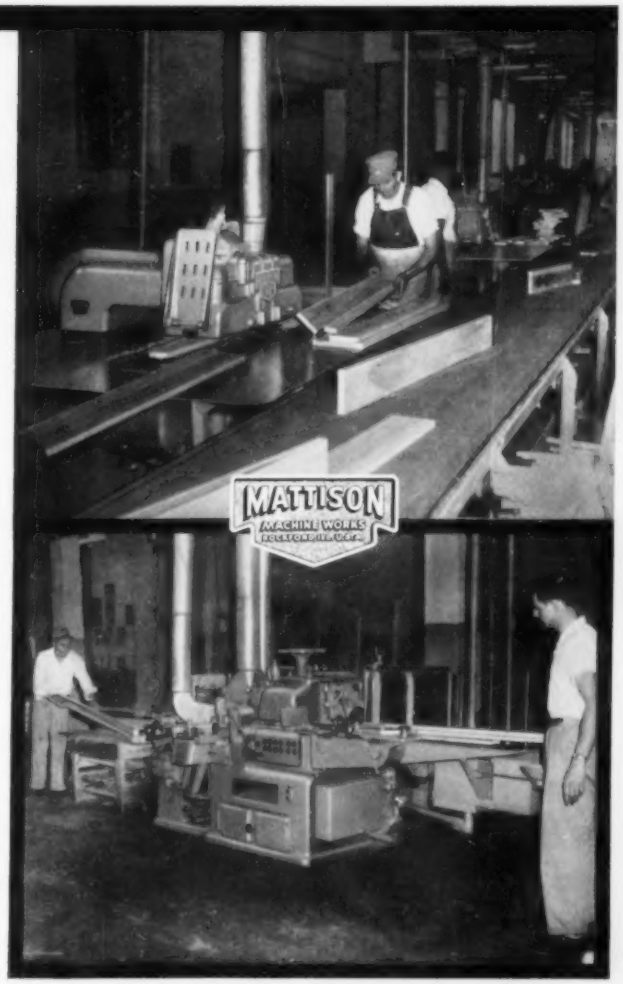
MATTISON MACHINES VITAL TO PROFITABLE PRODUCTION at United Furniture Corporation, Lexington, N. C.

United Furniture Corporation, Lexington, N. C., long ago discovered that the production of high quality furniture demands more than specification of the finest lumber available. High production, precision machinery is needed to play its part in quality manufacture.

Because of the high standards set for the furniture they make, United uses Mattison Rip Saws, Moulders, and Automatic Stroke Belt Sanders. They have found that every Mattison machine is designed and built to deliver quality work at low cost. Each machine can meet the rigid requirements established by United's production engineers.

In your plant, too, you will find that Mattison woodworking machines are performance-proved and built to last.

Remember—*Mattison means highest quality work at lowest possible cost.*



MATTISON

WOODWORKING MACHINERY

Mattison Machine Works
Rockford, Illinois

Gentlemen: Please send literature describing:
_____Rip Saws, _____Moulders, _____Sanders.

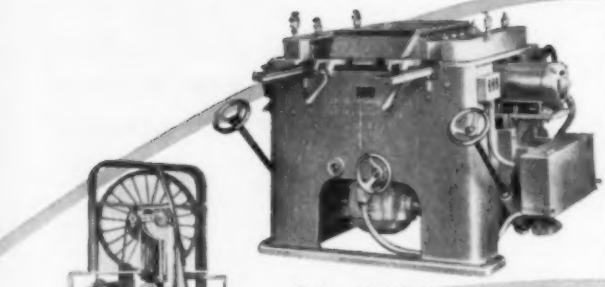
Name_____

Firm_____

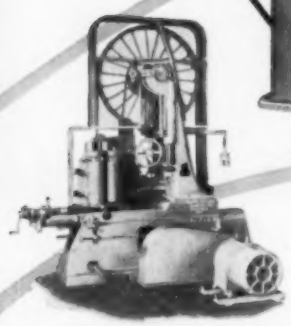
Address_____

City_____ Zone_____ State_____

HERE'S A *Quick Look* AT THE MEREEN-JOHNSON LINE

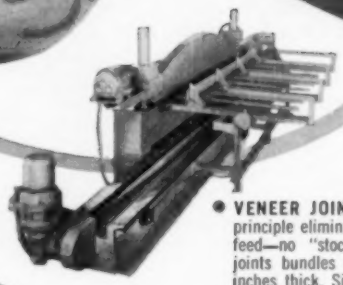


● **No. 326 MATCHER-JOINTER**—For sash and door, furniture and box factories—as well as for many special uses. Adaptable for jointing hogshead staves. Unequalled for "T" and "G" work. Described in Bulletin No. 326.

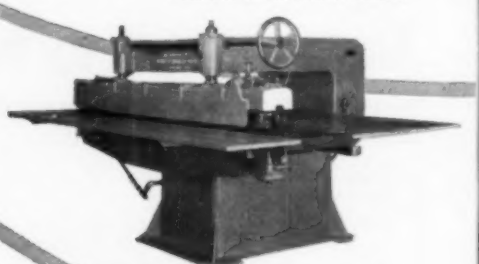


● **VERTICAL BAND RESAW**—Eight feed rolls eliminate "stock wobble." Sizes 48" to 60". Variable feed drive; 100% ball and roller bearings. 54" Twin Band Resaw. Combination band rip and resaw. Described in Resaw Bulletin.

The experience . .



● **VENEER JOINTER**—Traveling head principle eliminates shifting. No chain feed—no "stock wobble". Perfectly joints bundles of veneer up to four inches thick. Sizes from 90" to 212". Described in the Jointer Bulletin.

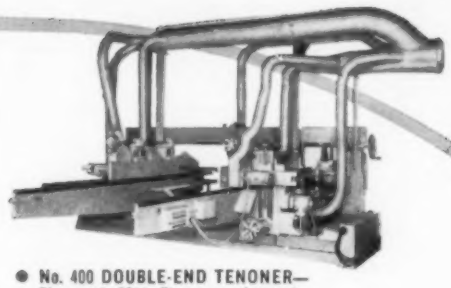


● **VENEER SPLICER**—Makes precision topeless joints. Adjusts itself automatically for varying thickness of veneer normally encountered. Welded steel frame with 49" throat clearance at right. Described in Bulletin No. 50.

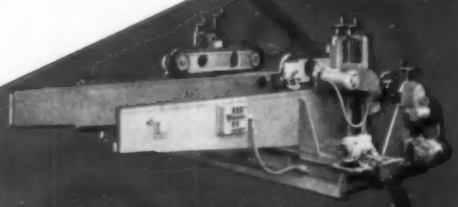
● Write for illustrated bulletins

MEREEN-JOHNSON MACHINE COMPANY

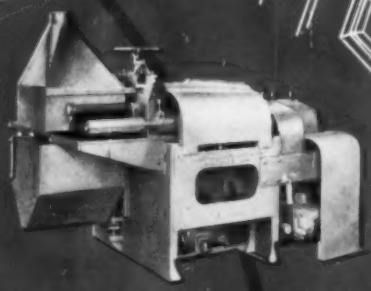
4401 LYNDALE AVENUE NORTH
MINNEAPOLIS 12, MINN.



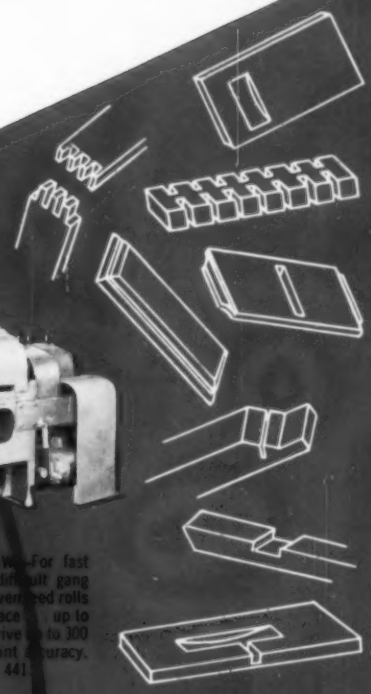
● **No. 400 DOUBLE-END TENONER**—Sizes up to 20' to fit your requirements. Will square-cut up to 96" ahead of trim saws. Several accessories to multiply its usefulness. Described in Bulletin No. 400.



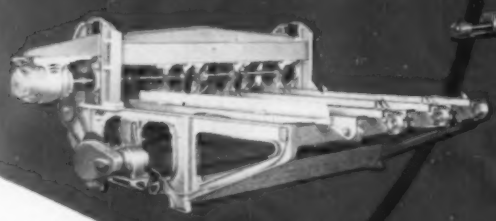
● **No. 600 DOUBLE CUT-OFF SAW**—Accurate production at high rates of feed. Labor saving attachments such as cope motors, dado arbors and other devices are available for specific needs. Larger sizes available. Described in Bulletin No. 600.



● **No. 441 GANG RIP SAW**—For fast production on the most difficult gang ripping jobs. Six power driven feed rolls . . . 12", 19" or 24" saw spacing . . . up to 125 HP . . . variable feed drive up to 300 ft. per minute . . . glue joint accuracy. Described in Bulletin No. 441.

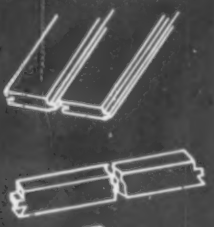


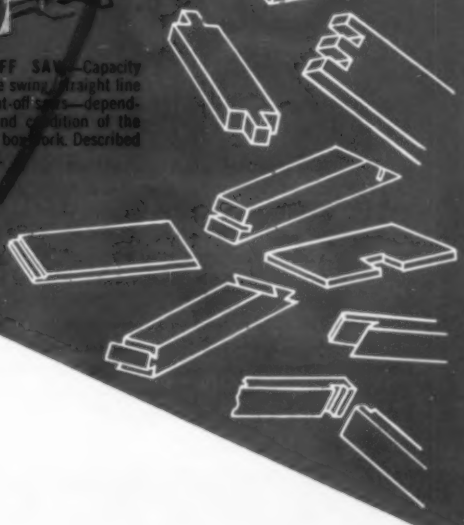
. the equipment . . . the manpower for producing precision machines

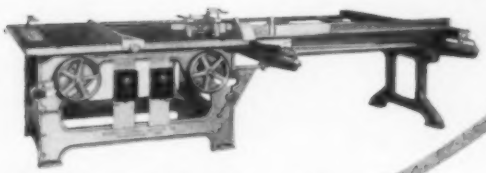


● **No. 435-H MULTIPLE CUT-OFF SAW**—Cuts long boards into short pieces . . . will square large size sheets . . . and will cut any number of grooves. It's an excellent plywood sizer. Described in Bulletin No. 435-H.

● **No. 477 CUT-OFF SAW**—Capacity equals two or three swing, straight line or roller carriage cut-off saws—depending on the type and condition of the stock. Excellent for box work. Described in Bulletin No. 477.







● **No. 442-MT COMBINATION SAW**—Versatile machine for ripping, cross cutting, grooving, dadoing, beveling, mitering. Cuts up to 48" wide and rips up to 50" wide. Easily handles large stock. Described in Bulletin No. 442-MT.

LETTERS to the EDITOR

Can Make Butter Tubs

Editor: Your "Wood Puzzler" No. 188 in the January issue interests us. We have a wood that is tasteless and would be suitable for manufacturing butter tubs. Could you tell us where to get tub making machinery? Also, could you give us the names of some in our vicinity now making wooden tubs?

—H. C. Kendall, Supt.
George C. Brown & Co.
Greensboro, N.C.

Sawmill Automation

Editor: Please send me a reprint of "Sawmill Automation," by Milton H. Mater, which appeared in your October and November issues.

—N. F. McGowin, Jr.
W. T. Smith Lumber Co.
Chapman, Ala.

(Editor's Note.—In response to many similar requests, "Sawmill Automation" has been reprinted in a 4-page folder. Single copies available free, quantities at a nominal charge.)

Sanding, Fraizing Pipe Bowls

Editor: We wonder whether you could help by informing us as to who designs and produces machines for sanding bowls for smoking pipes. Up to now, this work has been done by hand on a sanding wheel, which is very expensive and requires skilled labor.

At the same time, we would appreciate if you could advise us which company could deliver a machine to fraize out bowls from pieces of wood.

—M. Monderer, Pres.
Highlands Briar, Inc.
Kew Gardens, N. Y.

Wants Footage Counter

Editor: We are interested in a counting mechanism which could be attached to our moulder to give us a constant record of the lineal feet of material run. I don't recall seeing anything like this on the market, so would you please give us information or suggestions on this mechanism?

—S. H. Good
Hinkletown, Pa.

Stair Template Wanted

Editor: I am interested in a stair template to be used with a portable router. If you have a list of concerns manufacturing this item, I would appreciate receiving it.

—R. P. Hannon
East Syracuse, N.Y.

Farm Lumber Consumption—How Much?

Editor: In Your January 1956 issue, "Wood You Believe It?" mentions that farm construction consumes over 4 million bd. ft. of lumber per year.

It seems to us that this statement is too conservative. We use that amount of lumber alone in the manufacture of our laminated rafters for farm construction. We are confident that the source of your information must be in error.

—F. W. Kesler
Rilco Laminated Products, Inc.
St. Paul, Minn.

Why Not Try DFPA?

Editor: I wish to know if there exists a trade association for the cut-up industry involving plywood requiring boring, notching, special shaping, or easing edges. I am desirous of all possible information pertaining to this type of plywood specialty manufacture.

—H. E. Kayser
Tacoma, Wash.

Stanford Research Reprint

Editor: Please send up a copy of your 12-page reprint folder on the Stanford Research Report. Thank you.

—T. B. Miller
Aladdin Co.
Bay City, Mich.

"How to Get Top Yield"

Editor: Please send me a reprint of Mr. Noltemeyer's article, "How to Get Top Yield From Rough Lumber."

—E. P. McMahon
Nickey Brothers, Inc.
Memphis 12, Tenn.

(Editor's Note.—To fill requests such as these, we have reprinted the four Stanford Report articles in 12-page folder form, and Mr. Noltemeyer's "How to Get Top Yield" article in a 4-page folder. They are available, single copies without charge, large quantities at nominal fee, as long as supply lasts.)

HERE'S SOMETHING DIFFERENT
IN
CARBIDE TIPPED SAWS

MEYCO VIBRA-FREE*

You will be interested in this radically new development IF your carbide tipped saws sound like a police siren; IF they develop a "snaky" cut after short usage; IF they dull fast because carbide tips become chipped.

MEYCO VIBRA-FREE* saws embody a new principle in saw design, a new control over vibration by the use of sound absorbing dampers, which eliminate excessive vibration, excessive noise . . . produce smoother cuts, longer life for carbide tips. You get MORE cuts between sharpenings and operators LIKE to use Vibra-Free* blades. Investigate this revolutionary development TODAY. Write for Catalog No. 25.

EST. 1888

T. M. REG. U. S. PAT. OFF.

W. F. MEYERS CO., INC., BEDFORD, INDIANA

Adequate Production for Your Every Requirement

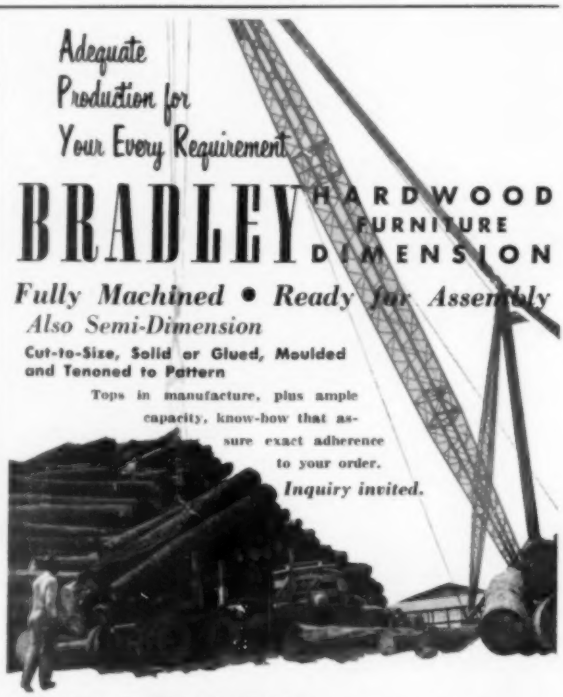
BRADLEY HARDWOOD FURNITURE DIMENSION

Fully Machined • Ready for Assembly
Also Semi-Dimension

Cut-to-Size, Solid or Glued, Moulded and Tenoned to Pattern

Tops in manufacture, plus ample capacity, know-how that assure exact adherence to your order.

Inquiry invited.



BRADLEY LUMBER COMPANY *of Arkansas*

WARREN, ARKANSAS

Tell our advertisers you saw it in **WOOD** *and* **WOOD PRODUCTS**

OMNIBUS of ADHESIVES

You can choose exactly the right, top-grade adhesive for almost any wood-bonding application from Cyanamid's omnibus of thermosetting resin adhesives. With these adhesives you'll also receive the benefit of technical knowledge, skill and service. The friendly help of our sales representatives is at your disposal.

Urac 180 – General-purpose, urea-formaldehyde resin in water solution. High-solids solution (66% P.M.M.A. Method) for drum, tank-car or truck shipments. Catalysts and hardeners are available for all wood-bonding applications – cold or hot press plywood gluing, high-frequency gluing, fortification of starch-dextrine adhesives, etc.

Urac 186 – Similar to Urac 180, but containing 60% resin solids.

Urac 185 – Craze-resistant urea-formaldehyde adhesive for assembly or secondary gluing operations. Two components – liquid resin and powdered hardener. Sets at room temperature with low pressure. Excellent for bonding decorative laminates, Masonite and other hardboards.

Urac 110 – Similar to Urac 180, but in powder form containing no inert materials. Catalysts are available for general-purpose wood gluing – cold or hot setting.

Urac 115 – Powdered urea resin modified to reduce clamping time in room temperature bonding of wood products without addition of highly acidic hardeners. Under special conditions, eliminates use of retaining clamps.

Ketac 1156 – A liquid ketone-formaldehyde resin. Alkaline curing, it was formulated especially as a fortifier of starch adhesives used in the manufacture of corrugated paperboard.

Melurac 255 – Powdered melamine-urea-formaldehyde resin, two-package, formulated solely as an adhesive for tapeless splicing of veneers.

Melurac 259 – Newly developed, one-package melamine-urea-formaldehyde resin for tapeless splicing of veneers, requiring addition only of water.

Melurac 300 – Melamine-urea-formaldehyde, one-package, fast-curing colorless powdered resin for hot pressing flat or molded plywood. Combines non-staining, moderate cure temperatures, durability, boil resistance. Ideal for exterior-grade plywood. New catalysts reduce cure rate to that of hot-press urea resins.

Melurac 301 – Powdered melamine-urea-formaldehyde resin without filler.

Melurac 304 – A melamine-urea-formaldehyde resin developed expressly for use as a particle board binder. A fine, free-flowing powder that is easily handled. Imparts no color to the particle board. May be blended dry or sprayed from water dispersion into wood chips or sawdust.

Melamine 401 – Hot press melamine-formaldehyde plywood adhesive for use with or without fillers. May be added to urea resins to improve durability of bond and materially lengthen working life of glue mix. Also used for laminating heavy timbers in marine applications and for general-purpose work where a boil-resistant, non-staining bonding agent is required.

Melamine 421 – A powdered melamine-formaldehyde resin for use as fortifier of plaster of Paris and gypsum to increase structural strength of cast products.

The trade-marks Urac, Melurac and Ketac are Reg. U.S. Patent Office

CYANAMID

AMERICAN CYANAMID COMPANY

PLASTICS AND RESINS DIVISION

38A Rockefeller Plaza, New York 20, N. Y.

In Canada: North American Cyanamid Limited, Toronto & Montreal

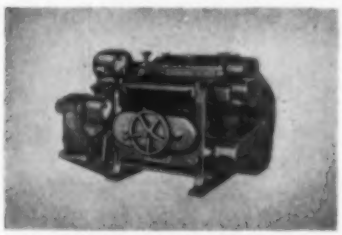
Regional Offices in: BOSTON . . . CHARLOTTE . . . CHICAGO . . . CLEVELAND . . . LOS ANGELES . . . NEW YORK

Whitney

The World's Finest Built

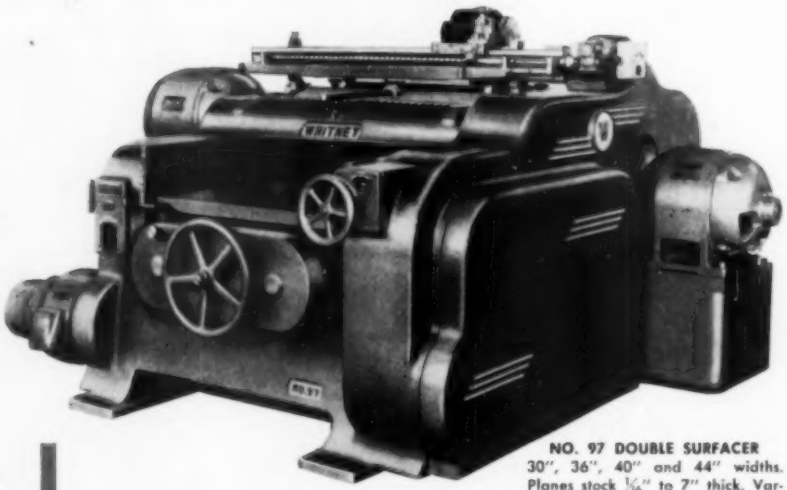
PRODUCTION SURFACERS

NO. 105 SINGLE SURFACER
24" width x 8". Variable Feed: 20 to 60 f.p.m. Cutterhead Motor: 7½ or 10 H.P.



NO. 32A SINGLE SURFACER
24" & 30" widths x 7¾". No. 29A—36", 40" & 44" widths. Variable Feed to 80 f.p.m.

NO. 37 SINGLE SURFACER
Extra Heavy Duty. Widths, 32", 40", 44" and 50". Variable Feed to 100 f.p.m.



NO. 97 DOUBLE SURFACER
30", 36", 40" and 44" widths. Planes stock 1/16" to 7" thick. Variable feed: 30 to 90 f.p.m.

The hundreds of Whitney Single and Double Surface Planers in the field today enjoy an enviable record of performance and service and attest to the fine quality of construction of Whitney planers. Today Whitney Single and Double Surfacers are the finest production planers ever built by Whitney, incorporating every time-tested and proven feature gained from more than 100 years of experience and know-how in fine planer construction.

What does this mean to you, a prospective planer purchaser? It means high quality, lowest cost planing, high production, low maintenance over the years and long, trouble-free service — the safest, soundest planer investment you can make today.

Write for bulletins. Ask for bulletin WPD3 for 97 Double Surfacer or bulletin WP53 for Single Surfacers.

In Our 118th Year

WHITNEY

BAXTER D. WHITNEY & SON, Inc.

Planer Specialists for more than 100 years

PLANERS • SHAPERS • AUTOMATICS • VARIETY SAWS • BACK KNIFE LATHES

WINCHENDON, MASSACHUSETTS, U. S. A.

Tell our advertisers you saw it in **WOOD *and* WOOD PRODUCTS**

How's Your Conscience Today?

It is estimated that 36 million Americans will be exposed to the contents of February *Readers' Digest*. For the first time most of those 36 million Americans will learn something about modern forestry and tree farming, about the importance of forest products, about the almost limitless potentialities of wood, and about the promise of new and exciting wood products for tomorrow.

If you have seen that issue you will recall that it contains the longest advertisement yet to appear in that magazine—an 8-page full-color, beautifully illustrated insert entitled, "Promise of the Trees"—an advertisement which "may well be the most widely read single insertion ever published."

The unique message, more like an article than an advertisement, tells the story of modern industrial forestry and what the industry is doing to grow and wisely use our forest resources. "Wood," it says, "is one of America's most versatile and valuable raw materials. It is used daily by every person, business and industry in such diversified items as lumber, plywood, pulp, paper, textiles, cellophane, felts, cork, glues, plastics, insulation and chemicals. Through product development, market research and improvement of manufacturing techniques, the forest industry is continuing to expand wood's economic usefulness to the nation.

"Forest industry scientists no longer look upon trees only as round logs to be sawn into square lumber . . . but, rather, as bundles of wood fibers packaged in bark. As a result of this new concept, it is now possible to use a greater variety of tree sizes and species, as well as to more completely utilize each log delivered to the mill. Many useful products are now being made from bark, slabs, chips, shavings, edgings, and other secondary forest raw materials."

These are things the public needs to be told. But let us not forget that our industry's progress and prosperity largely depend upon wider knowledge and application of the principles and practices described in the memorable advertisement.

Who sponsored that advertisement? Some wood industry association, or some great new promotional institute or bureau set up and supported by all elements of the industry to tell the facts about wood, to sell wood and wood products, regardless of species or regional interests and loyalties? No, we're told that you just don't get people together in this field to do that kind of an industry selling job as, for example, you do in the field of petroleum, or iron and steel. Somebody says it's impossible, so nobody tries. The shoe doesn't pinch tightly enough right now. It's still pretty much of a seller's market. There aren't enough "hungry" leaders in the wood field. Too many are inclined to sit back and "let George do it."

Isn't that why the vitally needed Stanford Research Institute study of the future demand for forest products was bought and paid for, and given to the industry, by one farsighted and generous company? And now, this greatest single advertisement ever published to tell the industry's story—to sell wood—has been sponsored, for the industry certainly as much as for its own interests, by the same company . . . Weyerhaeuser Timber Co.

To Weyerhaeuser we offer here our most sincere compliments on this latest evidence of its leadership in promoting wood for the whole forest products industry. The entire industry—everybody with a stake in the present and future of wood—should doff its hat to the enlightened Weyerhaeuser organization for bringing the message of the industry so clearly and so attractively to the attention of so many people.

What a pity that one company has to shoulder so much of this tremendous load!

COMPLEXITY of the rough mill process — the differences in operations, machines, materials, methods and their combinations — makes data collection both imperative and difficult

How to Increase Rough Mill Material Utilization

To improve methods, you must study small parts of problem, recognize importance of variation, understand process tolerance and controlled process

By AUBREY E. WYLIE

ADEQUATE LUMBER UTILIZATION information is not usually available in most woodworking plants for making everyday decisions affecting production. The purpose here is to stimulate interest in obtaining more reliable information on processes and to suggest more imaginative use of methods available for analysis. An understanding of variation within processes is absolutely essential to achievement of the improvements possible in utilization and to obtaining control at higher levels.

In analyzing production problems in rough mill operations, a few important concepts are often neglected. The problems which occur when man, machine and material are brought together in a production organization are many and complex. Problems arise due to: boards varying in size and quality, the setup and condition of a machine varying greatly, the wide variety of layouts, the combinations and sequences of operation, and the methods used in the mill as a whole.

The most complex mechanisms influencing production are the machine operators themselves. Moreover, utilization of stock received in the rough mill is affected by product design, production control procedures, factory organization—in fact, the entire manufacturing environment. The nature of these factors and their relationships is of great importance in that they influence product quantity, quality, and cost.

Considerable information has been gathered and distributed within and between plants on the above factors and their relationships to each other. Nevertheless, we still do not have adequate data on processes for making decisions in production leading to highest possible yields. The complexity of the process, making data collection imperative, also makes the task of collection more difficult.

Some of the most fundamental facts relating to material utilization are found in the National Hardwood Lumber Association's "Rules for Grading Lumber." The accompanying list of rules and suggestions, although incomplete, furnishes valuable suggestions on utilization practices contributed by many writers.

Many of the suggestions may be used to some advantage in most operations. But, in the long run, the most reliable and productive source of guidance for action in a given situation is home plant investigations and your own experience.

Because every plant and every operation is unique, and processes change from hour to hour, the very best evaluation method available should be used to bring about steady, high level performance. The development of better methods depends upon thorough study of (1) small parts of the overall problem; (2) recognition of the importance of variation, and an understanding of the concepts of (3) process tolerance and (4) controlled process.

In analysis of lumber yields, many investigators have followed the engineering principle of subdividing the work. More of this type investigation will show the part raw material characteristics play in the process results. Lumber grade requirements should be studied by samples to determine yields in various products. If the yield figures are charted in relation to conversion, they offer a means of selecting the best lumber for a given order. Compiling these figures may be expensive and a tedious process, but the savings they will affect will make them well worth the effort.

Let's assume that the yield data in a given plant accurately represent the production performance in the rough

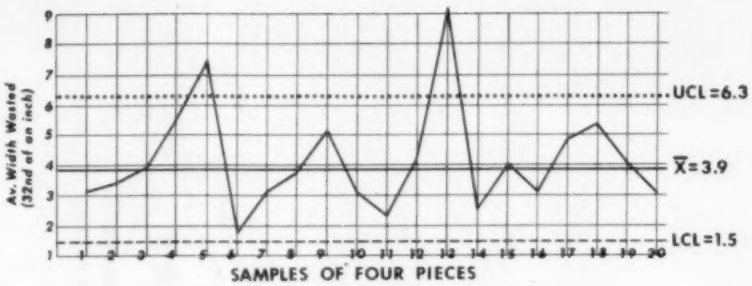
Tell our advertisers you saw it in WOOD *and* WOOD PRODUCTS

mill. In order to determine whether or not the yields are as great as they should be, some comparison must be made. Such a comparison might be between production figures and yield figures obtained by measuring sample boards for maximum product yield. Then, by comparing the result obtained with actual yield obtained in cutting the boards into the product, you have an accurate check on production.

If the production average of the mill is 66.1% and the sample yield is 70.2%, the supervisor will probably accuse his saw operators of doing a poor job and demand a 70% yield. He would also set up a closer checking system to insure such a yield.

But is the supervisor right? Actually, how reliable is the average of the sample? Is not the average the sum of the variations that existed in a number of individual samples? For the most part variation within the individual samples is neither determined nor reported. The probability aspects seem to be ignored.

The two most pertinent requirements listed by the American Society of Testing Materials Manual in presenting data such as in a study of yields are: "Present as a minimum, the average, the standard deviations, and the number of observations. Always state the number of observations," and "Present relevant information on precisely (a) the field within which the measurements are supposed to hold and (b) the conditions under which they were made."



UCL—Upper Control Limit LCL—Lower Control Limits X—Base Control

FIG. 1. Control chart of average of width of usable material thrown away at ripsaw

Why are these requirements necessary? Because average figures provide little information. No confidence can be placed in averages unless the sample size is given. The sample may have been made up of a dozen or only two boards. Even knowing that a large number of boards was involved isn't entirely satisfactory. There is still no indication of how individual boards vary as to yield and, therefore, how averages of such samples may vary.

In the case cited above, a more complete report might have shown that 20 boards were measured and the standard deviation for the yield measurement was 9.8%. With this information, we may explore the matter of confidence in using a recommendation of ASTM, again, on present plus or minus limits of uncertainty of an average. The limits are plus or minus a given number of standard errors depending on the confidence desired.

Two standard error limits for the average determined by use of an estimate of its variation are 70.2% plus or minus 4.73%. This means that we can expect an average of a sample of 29 boards to be as much as 4.73% different from the average of all boards of the same class or grade as often as one in 20 times by chance alone. The difference of 4.5% that was obtained would be expected in sampling as often as one in 10 times; that is, it is not significant. The sample information does not require an attempt to get operators to turn out better yields. They may be doing as well as can be expected.

It may be quickly decided that the sample is too small and a larger sample should be taken. Suppose that the initial sample had contained 100 boards with an average of 68.5% and a standard deviation of 7.45%. Comparison of this result with past experience in the plant would show that this difference of 2.4% between averages should be expected about once in 300 times in sampling. The one in 20 probability limits for the sample average would be 68.5 plus or minus 1.46%.

Two actual sampling results have been compared to show the significance of the differences obtained. The results were in samples of 4/4 No. 1 Common which were measured for per cent yield in random width material as indicated:

Cuttings	Maple	Walnut	Diff.
47 in. only	av=62.8	av=52.8	10.0
	SD=14.68	—	—
47 in. + 4 shorter lengths	av=81.3	av=76.1	5.2
	SD= 7.51	—	—

The probability of obtaining these differences in sampling from the same class of material is about the same, one chance in several hundred. Both sets of figures comparing maple and walnut give the same degree of confidence in a statement that the two

Continued on Page 55

RULES AND SUGGESTIONS FOR ROUGH MILL MATERIAL UTILIZATION

1. Study boards by grades for expected yields and compare with actual results
2. Select grade or grades of lumber to match economically the dimension produced
3. Grade boards for rip or cross-cut as first sawing operation
4. Combine grades of dimension in one set of cuttings
5. Cut several lengths in combination that fit general characteristics of usable areas found in boards
6. Saw random width material along with fixed widths
7. Use a glue jointer to produce suitable gluing surfaces on rough board edge after surfacing
8. Glue from ripsaw to eliminate jointing waste
9. If you conveyorize, remember that highly mechanized operations run at great speed may lead to greater waste of raw material
10. Watch for excessive overruns of parts; an occasional shortage is desirable
11. Dramatize waste information
12. Increase labor costs a little to save a lot of lumber cost
13. Pay a bonus for better yields
14. Don't give production incentive without regard to yields
15. Check cutting bills and improve specifications
16. Keep machines in good running order
17. Determine allowable waste by product classes
18. In match-ripping panels, place wider stock in a position for ripping and leave a piece sufficiently wide to serve as the edge piece of the next panel
19. Adopt a questioning frame of mind
20. Use control charts on lumber conversion operations

FIRST ESSENTIAL is a chief executive capable of directing others

Successful Management Depends on 3 Essentials

Expansion, quality products and profits depend on (1) capable chief executive, (2) selection and training of personnel, (3) use of management tools

By E. G. ACKERMAN
Stevenson, Jordan and Harrison, Inc.
Management Engineers

WHEN WE SPEAK of "successful management" we usually refer to certain well-known companies that have expanded rapidly, produce quality products and consistently earn substantial profits. We may think also of certain companies, both large and small, in our own industry that have demonstrated progressive leadership and have earned the respect and confidence of their customers, employees, owners and even competitors.

But seldom do we stop to consider how they have reached these goals. If we did we would have to analyze all managements of all progresive and profitable companies. The data would be confusing unless considerable time was spent in each company. We would have to observe and analyze not only present management, but the effects of past managements, back to the inception of the company.

Some companies that we may classify as progressive and as leaders in their industries have attained this position, not through the efforts of present management, but rather as the result of past policies. These policies may have resulted in a company of sufficient size so that size alone maintains a dominant position in industry.

SOMETIMES present management loses its drive and enthusiasm

We have seen many situations where present management has lost its drive and enthusiasm for further accomplishment. However, due to size, adequate financing and restriction, and the policies and aggressiveness of former managements, these companies are able to hold their position. Following good management it takes a number of years for the effects of poor management to show up as stagnation and non-progressiveness. Conversely, it takes time, sometimes even years, for good management to again start a company on the upward path.

If we trace back, we find that most companies were founded by one, two or three men who were thoroughly capable in their line, aggressive and endowed with considerable imagination and vision. If well-conceived, the venture grew and prospered up to the limit of the individual's capacity for detailed supervision of all activities. In many industries this point is reached when sales volume is somewhere between $500,000 and $1,000,000. This, then, becomes the first real test of successful management. Continued success will depend, first,

CONTINUED SUCCESS depends on the chief executive

on the leader or chief executive; second, on the character and ability of the men selected for key positions in the organization; and third, how well these key men are trained and are able to carry out responsibility and authority.

Unfortunately, many of these chief executives are unable to give up their membership in the "Do-It-Yourself" Club and consequently cannot build an aggressive, competitive organization.

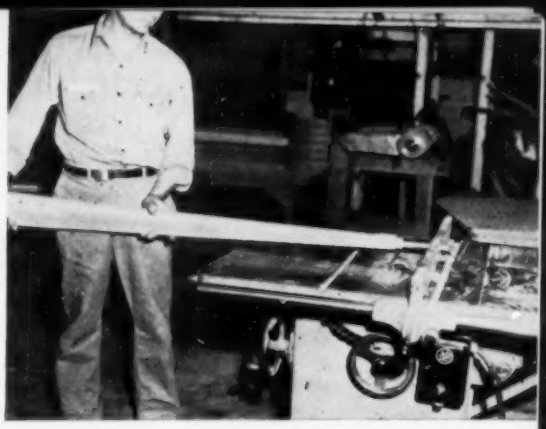
The first ingredient, then, of successful management is a chief executive who, in addition to certain skills, is a man of character and a leader capable of directing others in a way that will receive full cooperation. The character of the company is usually the reflection of the chief executive. If he is honest and fair in his dealings with employees, customers and pub-

Continued on Page 62

Tell our advertisers you saw it in **WOOD *and* WOOD PRODUCTS**

USING standard pattern, jig saw operator cuts out several intricate instrument panels at once

SPECIAL TOOLING JIG fits circular saw, holds mast in exact position for rounding top



JOINTING step treads at point of assembly

How Portable Power Tools Aid Production Line Efficiency

Ranging from large tilting arbor saws to various jointers, light machines help Chris-Craft maintain master craftsmanship in "mill assembly" operation

JOINTERS are located at strategic places along production line

THE CHRIS-CRAFT Corporation believes strongly that master craftsmanship is a rigid, absolute necessity in producing its water craft. It has also found accurate, dependable power tools expedient in achieving this goal on its production line.

For example, at the company's home plant in Algonac, Mich.—one of three in operation—numerous light woodworking tools have been placed at strategic points to assure quality control of products.

Here jointers, drill presses, grinders and several types of saws are located at specified locations in various departments and along assembly lines. These tools are used essentially in the company's finish woodworking operations, as against the rough mill depart-

Continued on page 56

BANDSAWS, circular saws and jointers cut out complex wood parts for boat kits

PRESS drills No. 50 holes in quarter round aluminum windshield strips for attaching to boat frame

FOUR AUTOMATIC pinners move forward and secure four corners of sash when operator presses button

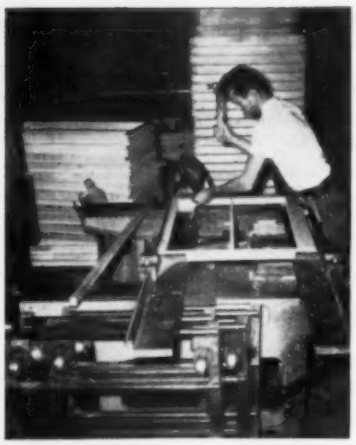
New Machines, Methods Speed Sash and Screen Door Production

IN THE NEVER-ENDING search for new ways to do tasks easier, cheaper and better, Farley & Loetscher, Dubuque, Iowa, has come up recently with two noteworthy developments.

One is an automatic pinning machine which has increased production on window sashes on long runs as much as 300% over the old method of nailing corners together with a hammer.

This is how it works. A workman assembles the parts of a sash in the jig, presses one button which forms and squares the sash, then presses another button, and four or six automatic pinners move forward automatically and independently, insert a pin, and return to position.

In the past Farley & Loetscher has installed screen wire in screen door frames by crimping the wire into a pre-cut groove, and tacking a screen molding on top. But the screen wire after considerable time and wear was inclined to pull out of the frame except where tacks in the molding held it.



NEW METHOD replaces hand nailing, is 300% faster

By the new method—recently devised and patented by Farley & Loetscher—the groove is no longer needed. Instead the operator merely lays the screen over the opening, then applies a thin line of resin around the edges. The screen molding is then laid on top and tacked into place as before. The glue sets almost immediately, establishing a solid bond between the screen door frame and the molding. Thus the screen wire is anchored in place by a multitude of rigid posts between wire mesh.

Does it work? When the operation was still in the experimental stage, a sample was placed at the entrance to the main office. Everyone who went in or out of the building had to walk across the screen wire. It withstood the weight of all who tramped over it.

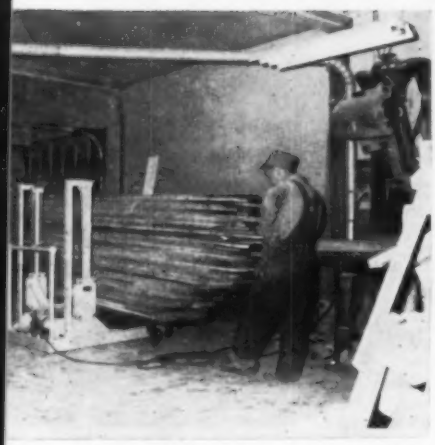
Finally a 265-pounder did the trick—but it was the wood frame that collapsed, not the screen nor the resin anchor that held it in place.

OPERATOR places screen wire on door frame

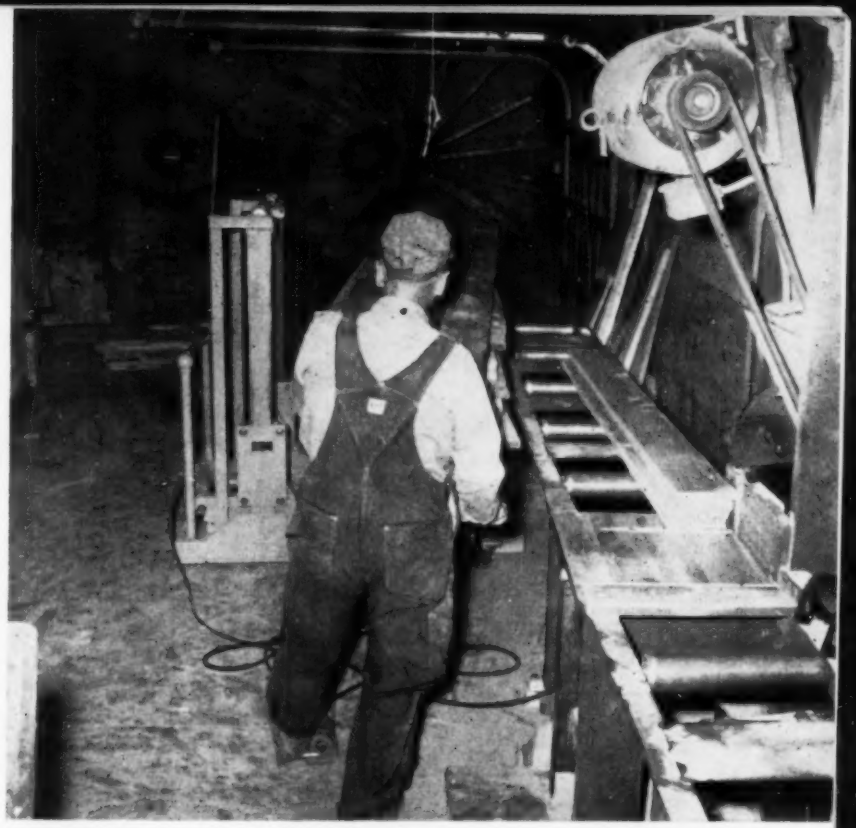
THIN LINE of resin is applied around edges

MOLDING is laid on top and tacked into place

on Time Savers



FOOT PEDAL raises or lowers load to convenient height



ONE MAN, using elevator to lift lumber to conveyor level, can flop boards onto conveyor. Two men were formerly required to lift boards to conveyor

Some Machines and Equipment Used at Farley & Loetscher and Central Parlor Frame Co.

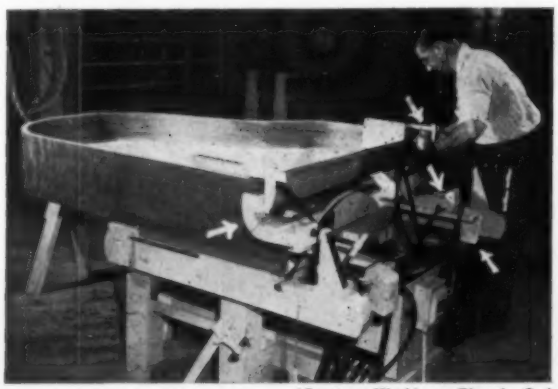
Pneumatic Sash Pinners and Nails..Spotnails, Inc., Persson Engineering Co.
Air Cylinders.....Modernaire, Inc.
Elevator..Anderson Machine & Tool Co.

Elevator and Conveyor Aid Cutoff Saw Operation

A HANDLING PROBLEM at Central Parlor Frame Co., builders of wood frames for upholstered furniture, Minneapolis, Minn., was aggravated because of a 5-in. dropoff beside the saw at the point where lumber is loaded onto a conveyor to be fed into the swing saw.

Lumber is moved to this point on 4-wheel trucks. At the top of the load, the operator could flop boards on to the conveyor. But as he worked toward the bottom of the load, it was necessary to call on another man to help him lift the boards up to the conveyor. And the 5-in. dropoff in the floor required lifting the boards that much higher.

The problem was solved by installation of a movable elevator or lift. Nowadays the truck is located beside the conveyor, and the arms of the elevator rolled into place underneath it. By means of a foot pedal, the saw operator without moving from in front of his saw, can lift the load to the level of the conveyor and lower the empty truck.



ARROWS POINT to wood pressure blocks faced with stainless steel heating elements on veneering jig. Custom-built transformer and cables are at lower right.

(Courtesy Washburn Electric Co.)

Veneering Jig Using Resistance Heaters Saves Time, Labor, Floor Space

VENEERING JIG recently built by employees of Steinway & Sons, Long Island City, N. Y. employs new resistance heaters. It is said to save time, labor and floor space.

A urea resin glue is used, providing a longer assembly time and a more durable bond than the glue formerly used. The heaters cure the bond in less than one minute, and only one clamp is required.

Since the equipment uses low voltages, there is no danger to employees of shocks or electrical burns.

OFFICIALS OF U. S. PLYWOOD Corp. and Crown Zellerbach Corp. inspect weather-and-water-proof plastic surfaced fir plywood panel produced by process developed by both companies. They are (left to right) U. S. Plywood officials: Dr. O. Harry Schrader, general manager, Northwest Division, Seattle; Gene C. Brewer, vice-president, Redding, Calif.; S. W. Antoville, president, New York; and Crown Zellerbach officials G. J. Ticoulat, vice-president, San Francisco; and William J. Zellerbach, director, Marketing Services, San Francisco

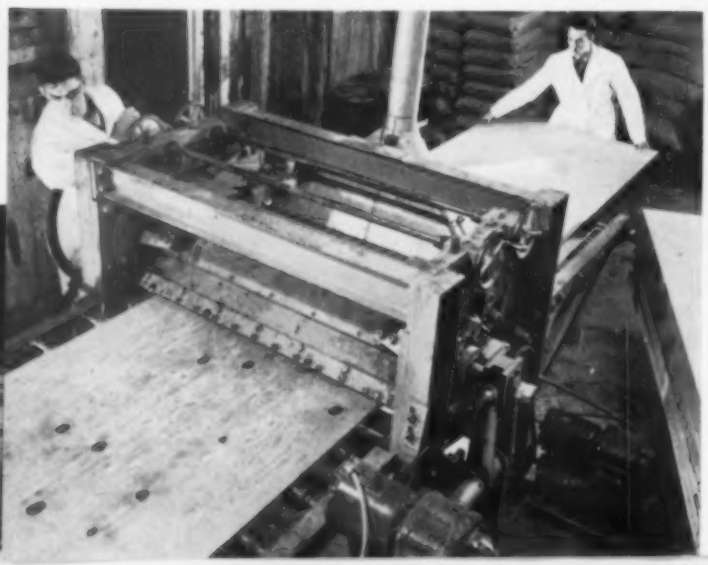
New Process Performs Plastic Surgery on Plywood

New weather, water-proof, plastic-surfaced and filled plywood produced by process that cuts costs by increasing veneer yield from log

A UNIQUE NEW development in plywood technology has been announced jointly by United States Plywood Corp. and Crown Zellerbach Corp. The immediate result is a weather and waterproof plastic-surfaced fir plywood panel that promises to lower the cost and lengthen the life of homes, commercial buildings, signs, truck and trailer bodies, small boats, built-ins, doors, counter tops—even kitchen cabinets and "do-it-yourself" items.

Both companies say that among other things the new process will significantly lower production costs in the manufacture of plastic-surfaced

(LEFT) FIRST STEP IN PRODUCTION of repaired panel surfaces is routing of existing defects. Then panel is fed into special new machine that forces plastic filler against an oscillating "doctor blade" which fills every defect in the panel face. (Right) Panel is then carried by conveyor to be cured under infra red reflected heat and sanded smooth



This finish can lick any kid in the class

Peabody Seating Company protects its wood furniture . . . and its reputation for quality . . . with Glidden CELSYN finishes. These superior wood finishes are custom-formulated for Peabody to resist the mars, scratches and other damage inflicted by school children.

Glidden CELSYN wood lacquers and sealers are available in many different grades... can be made to fit your exact product requirements ... whether fine finishes for costly pianos or durable and economical coatings for juvenile furniture and budget-priced suites.

All CELSYN finishes are made to Glidden quality standards, priced within your finishing allocation and adaptable to present equipment and finish schedules. Contact your Glidden representative for complete product information and technical data on all CELSYN wood finishes.

VAPON

QUALITY Glidden PRODUCTS

NUBIAN

INDUSTRIAL FINISHES DIVISION

11005 Madison Avenue • Cleveland 2, Ohio

SALES OFFICES AND FACTORIES: San Francisco, Los Angeles, Chicago (Nubian Division—1855 North Leclaire Avenue), Minneapolis, St. Louis, New Orleans, Cleveland, Atlanta, Reading. Canada: Toronto and Montreal

(LEFT) FOLLOWING AUTOMATIC FILLING of defects in panel, it is sanded to obtain a smooth solid surface ideal as the foundation for a plastic overlay, a fine veneer face or for other surface applications. (Right) Plastic surface, a resin impregnated cellulose fiber sheet, is applied to the panel and then permanently fused under heat and pressure in hot press

plywood, and that it increases veneer yield from the log.

The new panel is faced with a resin cellulose plastic sheet fused to the panel surface. It combines the paintability of modern plastics with the strength and versatility of plywood.

The most significant aspect of the product, however, is the way it is made. The key to the process is a new machine that automatically fills knotholes, splits and other surface irregularities in the base panel with a plastic compound providing a smooth, solid foundation for the plastic overlay. This eliminates without any sacrifice in quality the need for scarce and expensive high-grade surface veneer normally required to provide a solid base for the plastic surface.

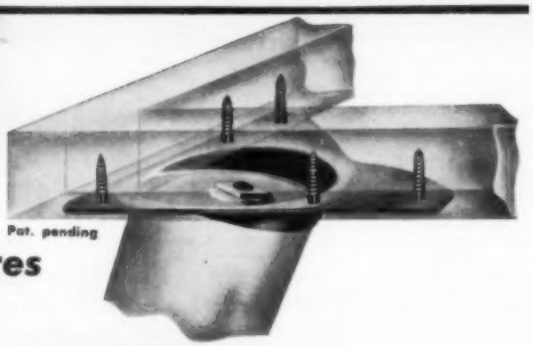
Commenting on the development, S. W. Antoville, president, U.S. Plywood Corp., says, "This is the first of a series of contemplated improvements that could revolutionize the technology of the plywood industry." He claims that the new machine materially increases usable yields from the log, making it possible to utilize veneer from abundant, lower-cost raw material such as second-growth timber and saw logs.

Crown Zellerbach Corp.'s sales vice-president, G. T. Ticoulat, states that the patching machine and the plastic overlay itself were the results of 10 years of intensive research as part of a long-range objective of gaining maximum utilization of available timber resources.

United States Plywood sees a tremendous potential market for the new product, called Duraply. For example, about 1.5 billion sq. ft. of all kinds of material will be used for siding surfaces on new homes alone in 1956. Although total production of similar products is comparatively small, their acceptance in the construction field is gaining ground so fast that industry

Continued on Page 58

YOUR PRODUCT IS ONLY AS GOOD AS ITS PARTS



Pat. pending

***Victor* Clinch Nut Plates give you more good features for Extra Sales Appeal**

NEW TRIANGULAR STYLE

Allows direct attachment to rail construction; eliminates corner blocks. (see illust. above) Order #20-flat, #10-10° offset, #15-15° offset.

Drums of 2,000, 6c;
bags of 500 7c.

5/16" HANGER BOLT

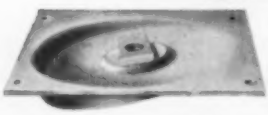
2 inches overall with full ½ in. of machine thread for attachment to plate.

15 M, $11.95; 5 M, $12.95;
1 M, $14.95; Price Per M

SQUARE STYLE, FLAT

Like all Victor Clinch Nut Styles it offers unusual strength and rigidity.

No weak, extruded side walls.
Order #7,
drums of 2,000, 4c;
bags of 500, 5c



SQUARE STYLE OFFSET

Holds leg at 10° angle. All Victor plates are clean, uniform and trouble free. Strongest available.

Order #7A,
drums of 2,000, 5c;
bags of 500 6c

FULL ¼ IN. MACHINE THREAD

Only Victor plates have a full ¼ inch machine threaded nut to grip hanger bolt. Nut is clinched permanently onto plate for unequaled strength.

"We lead, others follow"

Victor SUPPLY CO.

48 LOGAN ST., S.W.
GRAND RAPIDS 2, MICHIGAN
PHONE GLENDALE 6-1335

Copyright 1956, Victor Supply Co.

Extra durable bonds with

LAUXITE* 326

Monsanto's one-package melamine-urea adhesive upgrades skins and doors with outstanding dry strength and high water-resistance!

MONSANTO

*LAUXITE: REG. U. S. PAT. OFF.

Lauxite 326 is specially formulated by Monsanto for hot press gluing of exterior work. This dustless, water-soluble powder assures a lasting bond with a high degree of water-resistance.

It is easy to prepare – add only water. Its working life is at least 72 hours at 75°F. Its cure time is fast. It has little formaldehyde odor. Its coverage is high – 25-35 pounds for 1,000-square feet of single glue line.

The superior washability of Lauxite 326 makes equipment cleaning easy. Its light-color glue lines help to eliminate staining problems on thin veneers.

Let us tell you how Lauxite 326 can be economically formulated to satisfy your extreme and intermediate durability requirements. Write today for test samples and data sheets. Monsanto Chemical Company, Plastics Division, Room 1133, Springfield 2, Mass.

OPEN DEFECT (left) covered by an African mahogany veneer leaf (right) takes on a pleasing appearance

AN ANSWER TO THE QUESTION

In the article *Six Ways to Spur Hardwood Panel Sales* in the April 1953 issue of WOOD & WOOD PRODUCTS, "Price Too High" was given as the main reason hardwood paneling is not used more widely. To reduce the cost, it was suggested that producers "make paneling from the lower grades."

This brought a challenging question from a number of lumbermen, "How can low-grade hardwood lumber suitable for paneling be made without considerable expense which boosts the price far above that of competing materials?"

We feel the suggestion in the accompanying article answers this question.

—*The Authors.*

How to Make Salable Paneling from Low-Grade Hardwood

Characters, figures cut from 1/28 in. veneer and glued over defects, produce beautiful, distinctive effect on No. 2 and 3 Common hardwood paneling

By CHARLES I. MILLER and ROY C. BRUNDAGE
Purdue University

MOST CONSUMERS will not consider hardwood paneling produced from the common grades if the boards contain open or undesirable defects. If paneling is to be produced from common grade hardwoods, then, it is necessary to regrade the lumber and sort out paneling stock free from such defects. This forces the producer to increase the price far above that of competing materials—knotty pine in particular. This is the key problem in the hardwood lumber paneling picture.

The solution may be stated simply: Find an economical and acceptable method of hiding the open defects so that one can use many No. 2 and 3 Common boards which would otherwise require considerable cross-cutting and ripping to eliminate the defects.

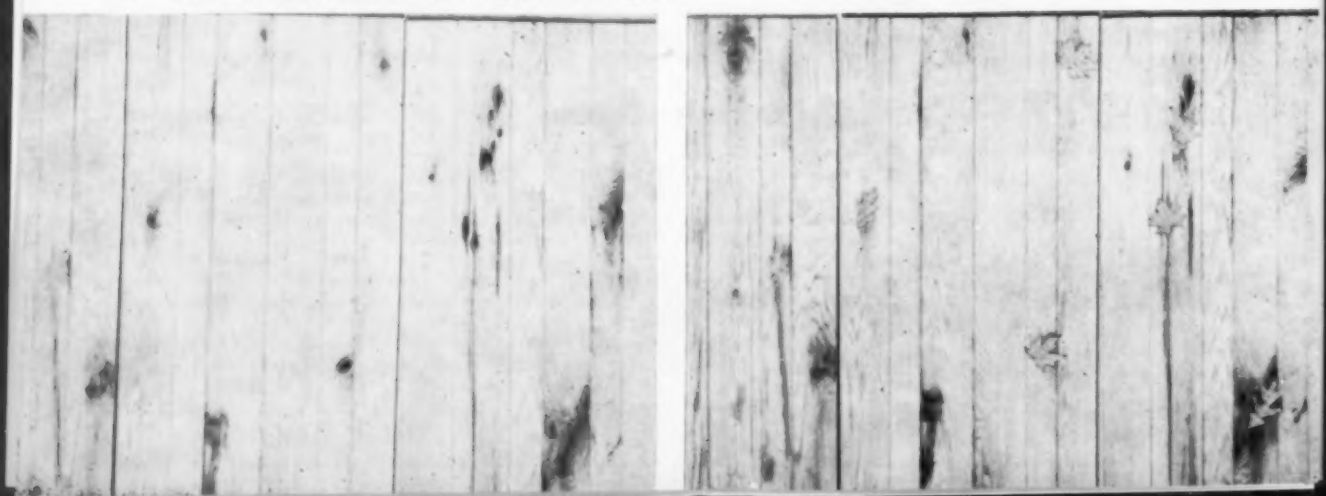
There are two possible answers to the problem, one a recognized method, the other new and original.

The recognized method of "hiding" open defects is to fill them with a colored plastic filler which matches the defect and maintains the contrast. This method is time consuming, and unless great care is taken in matching and finishing, an unattractive job results. Even though an acceptable filling technique is developed, labor cost precludes its being used widely.

The new method of solving the problem was suggested by Chuck Miller, 13-year-old son of one of the authors. It is startlingly simple and surprisingly effective. Chuck's idea was to cut leaves, animals, nursery rhyme characters, or other figures from 1/28 in. veneer and glue them over the defects. Such figures could be used to produce a motif for a den, recreation room, child's bedroom, dining room,

Continued on Page 61

(LEFT) THREE sample panels made from unselected No. 2 and 3 Common oak with defects untouched. (Right) Same panels —open defects on left panel have been filled, defects in other two panels have been covered with veneer leaves. Pictures above are closeup of open knot at lower right of middle panel



Every little bit cuts MORE

on a

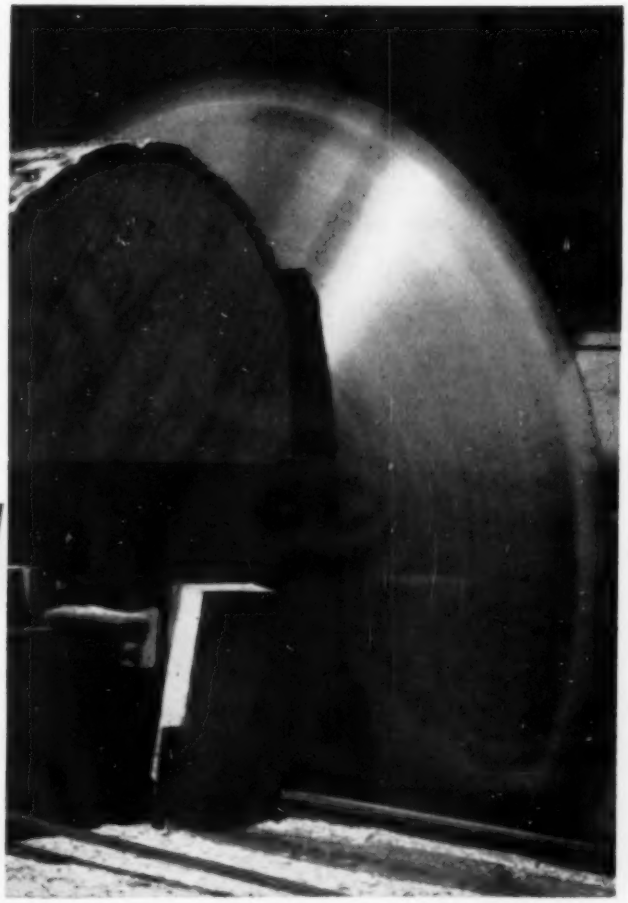
SIMONDS INSERTED TOOTH SAW

The tough, high temper steel plate of a Simonds Inserted Tooth Saw holds its tension . . . seldom requires hammering . . . permits heavy feeds in all types of cutting, at any season of the year. Rugged as the range, a Simonds Saw stands up longer under general saw mill use and abuse.

Sockets or gullets are milled and held to close tolerances, insuring uniformity and perfect fit for new bits and shanks when needed during the long life of every saw. Fitted with "Blue Tip" Bits and "Red Circle" Shanks, Simonds "Red Streak" Saws cut fast and straight, are the most dependable and economical for head saw or edger use.

So get a Simonds Saw and save, as you cut more and higher grade lumber.

For Fast Service from Complete Stocks — Call your **SIMONDS Industrial Supply DISTRIBUTOR**



SIMONDS SAW AND STEEL CO.
FITCHBURG, MASS.

Factory Branches in Boston, Chicago, San Francisco and Portland, Oregon
Canadian Factory in Montreal, Que.
Simonds Divisions: Simonds Steel Mill, Lockport, N. Y.
Heller Tool Co., Newcomerstown, Ohio
Simonds Abrasive Co., Phila., Pa., and Arvida, Que., Canada

GOOD HOUSEKEEPING such as that practiced in the Mengel Co. Elizabeth City, N. C., veneer plant helps put a workman in a "work safely" frame of mind

A Safety Plan That Controls Potential Causes of Injury

Accident prevention gains in a clean, healthy environment where the workman is treated as a human being and hazards are studied and corrected

By L. JACK DUNMAN
Director of Safety
The Mengel Company

WHAT'S WRONG with our safety programs? In every segment of the wood industry from the sawmill to finished product the answer to this question can be stated in one short sentence. *We have too much Safety Program and not enough accident prevention work.*

If we are satisfied to look at some fantastic figure called frequency and smile when it drops 1/10 of 1%—if we are satisfied to hang some gruesome poster on the wall, and boast, "Everything is under control. Our frequency is down and the new posters from the insurance company or National Safety Council are up" . . . someone is being kidded. It may be the boss, the workers or the "man in charge" of safety . . . but someone is either kidding or being kidded.

Don't misunderstand—we do need frequency figures, but they are not the true figures of an accident prevention program. They show how many accidents rather than what the overall program amounts to. We also need posters—but let's get away from the old blood and thunder type. Instead of a negative approach, let's show a man happy with two full hands, rather than sorrowful with several fingers missing.

Even today accident prevention is based largely upon an analysis of the causes leading to a *major* accident. This is due to a misunderstanding of what an accident really is.

Campaigns, tables and statistics all feature lost-time accidents—the more spectacular occurrences, to the exclusion of minor accidents. Consequently

WELL designed jigs provide safety as well as accuracy

future action in prevention work is based on a relatively few so-called major accidents.

Undoubtedly, the most misleading term in any safety program is the expression, "major or minor accidents". Honestly, there are only major and minor injuries which result from accidents. The accident and the injury are completely distinct. One is the result of the other. In fact, one thing wrong with our safety programs is our assumption that no accident is serious unless it produces a serious injury.

Every day thousands of accidents occur that are capable of producing a serious injury. To have a successful tangible accident prevention program, we must weigh each individual accident in terms of its potential for creating injury. If only lost-time accidents are studied for future preventive work, our efforts are often misguided. We overlook valuable data and our preventive work suffers.

While the accident itself is controllable, the severity or cost of the injury is not. But diagnosis of so-called near accidents—those that produced no injury, but might have—provides an easy approach to anticipating and preventing actual injuries.

A successful safety program is not static. That done a year ago, two years ago, 20 years ago ought not to be good enough next week. Too often the typical safety program consists of a book of out-of-date "Don't" rules, a few passable machine guards, too many posters and a haphazard accident investigation procedure.

Rule books necessary? Yes, but not a mass of pages of numbered paragraphs each one beginning with the word "don't". Such rules are an insult to a man's intelligence. We teach a man the wrong way to do his job, then write a new "don't" rule to take care of the one that failed.

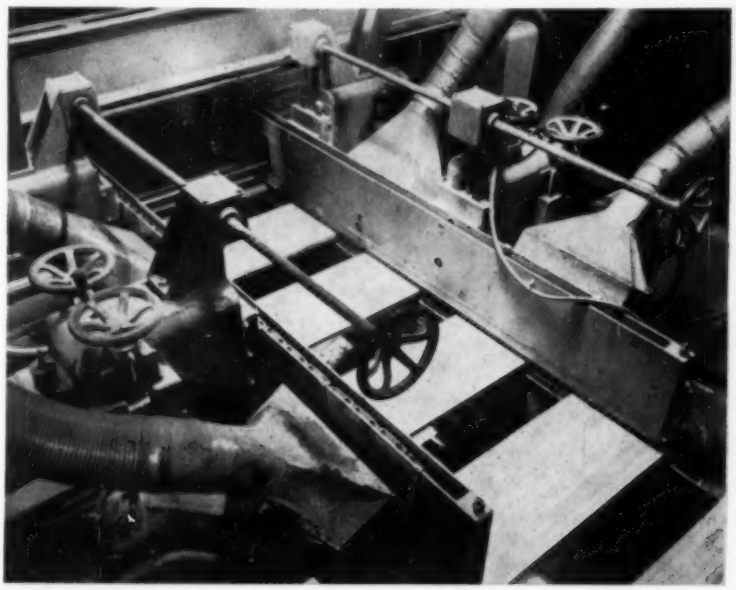
Machine guards necessary? Absolutely, but too many machine guards are a worse hazard than the machine. We need efficient, simple machine guards. Too often the few adequate ones developed by the manufacturers are omitted when a machine is purchased because management regards them as extra equipment that costs money.

In any event, the man actually operating the machine knows more about guarding than he is given credit for; a good approach is to ask him to build a guard for his machine, or design one, and then have it built. But be sure that the idea is given *full credit*.

Regardless of injuries, there are actually only two causes of accidents: (1) Unsafe physical conditions of

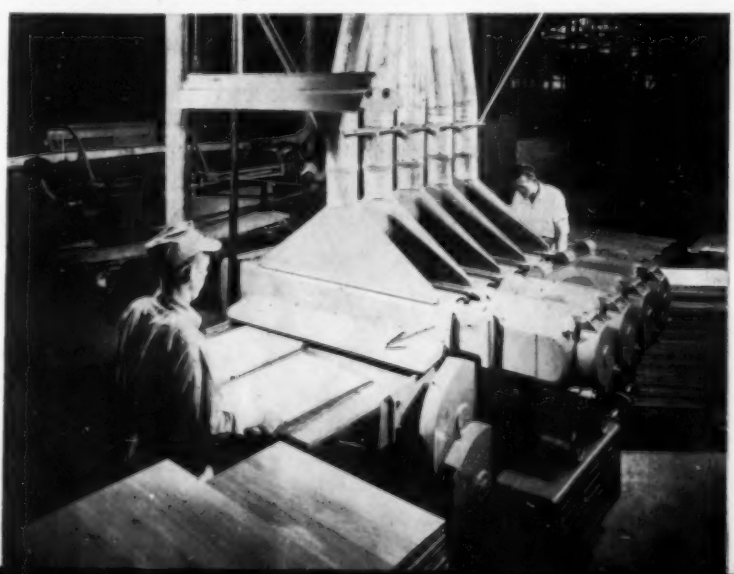
Continued on Page 60

FOREMEN'S safety meeting at the Elizabeth City, N. C., veneer plant. At these meetings so-called near accidents—those that produced no injury, but might have—are discussed to anticipate and prevent actual injuries



WELL DESIGNED hoods and exhaust on double end tenoner make for healthier, safer working conditions

WORKER-SUGGESTED guard over chain of drum sander



INSERTION of the crown hinge pin completed the erection

SPECIAL SPLICE joints at quarter points of the arch were accomplished by using ½ in. thick steel plates 12 ft. long on top of arch and 6 ft. long on bottom

TWELVE WOOD ARCHES, the longest ever made, of glued laminated Southern pine lumber constitute the sole structural support of immense building

Lumber and Plywood Scale New Heights in Construction

Glued laminated Southern pine arches featured in 8-story high Florida Jai Alai court — Plywood teams with steel in new long-span truss roof design

TWO NOTEWORTHY DESIGNS for building construction using lumber and plywood in new and different ways recently completed are:

(1) The Jai Alai Fronton at West Palm Beach, Fla.—Jai Alai, the nation's newest sport, is a game imported from the Basque country of Spain—and

(2) Several large buildings that have been constructed in the Northwest using wood framing for long spans in which long-length plywood is used in combination with steel.

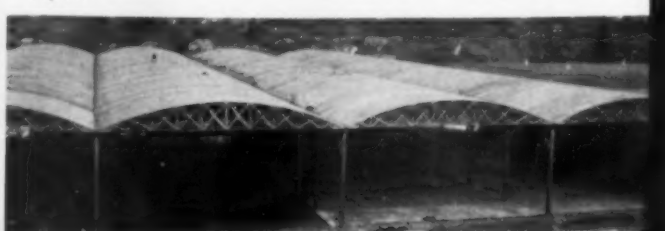
The new Fronton (court) at West Palm Beach is the first building of its size to be designed basically of wood. It encloses a post-free area large

Continued on Page 65

ROOF UNITS are assembled in segments. Plywood is nailed to 2 x 8 plate, plywood is bolted down with bolts at each panel point

TRUSS of 8 ft. unit of roof structure is swung into place by crane, and seated, then lines are slacked away and tongs removed

COMPLETED ROOF framing before endwalls and sidewalls were placed. Total cost of this warehouse is $2 per sq. ft.



SPECIAL THICKNESSES of face veneer is a feature of our service that we stress in our effort to supply customers with exactly what they need. We stand ready at all times to cut face veneer up to ⅛" thickness in any quantity and from any wood available. Usually we can ship the second or third day.

We maintain an unusually wide selection of fine domestic and foreign woods ideal for architectural applications and furniture use.

In our substantial inventory of band sawn high grade lumber, you can find not only the current items of foreign and domestic lumber but many of the "hard to get ones." In addition to air dried lumber, there is available for over night quick shipment, good quantities (31 species) of kiln dried lumber.

CHESTER B. STEM, INC., 999 Grant Line Rd., New Albany, Ind.

CUSTOMERS EXPECT MORE FROM

STEM

AND THEY GET MORE

These higher grades of
VENEER and LUMBER
manufactured and available at all times

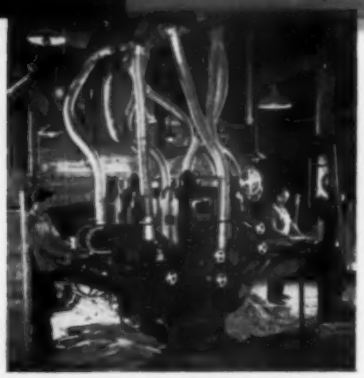
Teak • Butternut • Satinwood • Cherry • Rosewood • American Walnut • Prima Vera • Avodire • Limba • Knotty Pine • Cypress • Bosse' • English Brown Oak • Koa • Hickory • Indiana Soft Textured White and Red Oak • Mahogany • Hard Maple • White Ash • Harewood • Orientalwood • Birch • Crowntree • Yellow Poplar • Zebrawood

Wood Dust Collection System Cuts Fuel Costs $13,000

ROWE MANUFACTURING CO., Galesburg, Ill., reaps four benefits from its dust control system, chief of which is a direct dollar saving of $13,000 per year. Manufacturers of garage doors, ladders and other wood products, Rowe operates more than one hundred woodworking machines of all types which produce many tons of wood dust per day. The dust is collected by hoods at each machine, sucked into one of two main 21-in. diameter ducts installed the length of the principal woodworking building and blown into a central collector.

Not only does this efficient system increase production by eliminating the dust nuisance from the air in the plant, but it has had a noticeable effect on improved employee and community relations. In addition, the dust is burned to furnish steam for power and processing. Before the dust collection system was installed, oil was burned. The savings realized by burning the waste dust amount to $10,000 during the winter months and a minimum of $100 per week during the warmer months or a total of more than $13,000 per year.

The dust collected is stored in a bin holding 2-3 carloads of wood dust and fed pneumatically at a slow rate directly to the boiler. A system of rotary valves prevents "flare backs" from the boiler from reaching the storage bin. During winter months, additional scrap is fed to a hog for grinding and fed through the collection system into the boilers.



Photos courtesy Pangborn Corp.

WOOD DUST enters several hoods at production machines and is drawn to one of two main ducts running the length of the plant

LARGE EXHAUST fans blow dust into collector from woodworking machines

DUST IS FED pneumatically at a slow rate to boiler from storage bins

General Electric is just one of the many users of Radialloy-Tipped* Circular Saw Blades

Illustrated is a General Electric class being taught Textolite* plastics fabricating with a Radialloy-Tipped* Circular Saw Blade.

Whatever your "tough sawing" problem may be, there's a Radialloy-Tipped* Circular Saw Blade available to do the job better, quicker, far more economically.

Write for prices and brochure on our complete line.

Manufacturers Representatives: Some Select Areas Still Open. Write.

Radialloy-tipped SAWS & CUTTERS

RADIAL CUTTER MANUFACTURING CORPORATION
841 Bond Street, Elizabeth 4, New Jersey

*Reg. U. S. Pat. Off.

SPECIALISTS AND LEADING MANUFACTURER OF CARBIDE-TIPPED SAW BLADES

For the newest in coated abrasives... watch BEHR-MANNING!

Photo, Oakley Oscillating Edge Sander

Smoothing difficult contour areas is easy with a Metalite Spiraband.

Behr-cat Strapping Tape holds tight without damaging wood surfaces.

India and Hard Arkansas Oilstones for clean, sharp cutting edges.

Fast way to finish edges!

Banded edges of dresser tops are sanded in jiffy time with this modern coated abrasive application on the job. A smooth-cutting, long-lasting BEHR-MANNING Abrasive Belt running on an Oakley Oscillating Edge Sander makes this possible.

Though your finishing operations may be different, a modern coated abrasive method will assure increased production and better finishes every time. Ask your local BEHR-MANNING Field Engineer to demonstrate the advantages of abrasive belts — at a local BEHR-MANNING Demonstration Room or right in your plant. Call him today, or write Behr-Manning, Troy, N. Y., Dept. WP-3.

In Canada: Behr-Manning (Canada) Ltd., Brantford.
For Export: Norton Behr-Manning Overseas Inc., New Rochelle, N. Y., U. S. A.

W-3

BEHR-MANNING®

BEHR-MANNING division of NORTON Company

▲ COATED ABRASIVES
▲ SHARPENING STONES
▲ PRESSURE-SENSITIVE TAPES

FOREIGN WOODS

By George N. Lamb

JELUTONG

Dyera lowii
Apocynaceae (Dogbane) Family

JELUTONG belongs to a large family undistinguished for its timbers except the genus Aspidosperma which produces a boxwood type of wood. JELUTONG is one of a number of large timber species which are more important for the production of wild rubber than for wood.

JELUTONG latex is one of the principal ingredients of chewing gum. This is obtained by tapping or bleeding the tree. The name JELUTONG is restricted to Malaya and applied to both the latex and the timber. The tree is cylindrical and without buttresses.

The sapwood and heartwood are not differentiated and almost white when freshly cut but assume a uniform pale straw color on exposure. The wood is soft and light with a specific gravity of 0.40 and is easy to cut with sharp tools. It is straight grained with a rather fine, even texture. JELUTONG is one of the better light weight woods for local use. The timber has been exported to the United Kingdom and the U.S.A., but is not likely to find a market in this country as there are better light weight tropical American woods.

Other woods called JELUTONG: Unidentified shipments to Singapore are called red or white Jelutong. Alstonia sp. has been mixed in with Jelutong.

MANGROVE

Rhizophora mangle
Rhizophora (Mangrove) Family

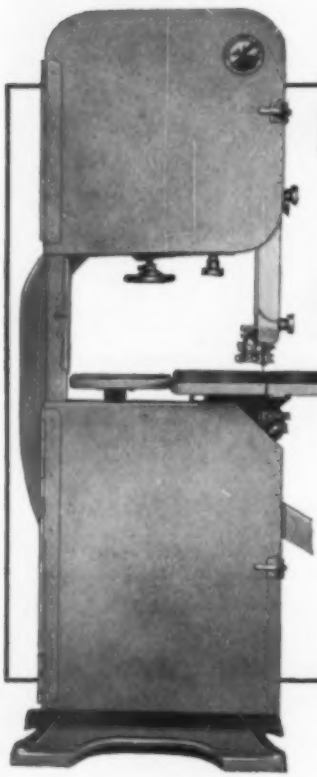
The red MANGROVE is pan-tropic and literally encircles the earth. It is confined to coastal flats and estuaries where the water is saline or brackish. It walks forward into shallow water by sending down aerial roots which form impenetrable thickets which catch sediment and debris. In fact, its greatest service to man is to protect against erosion and make new land. This service is further promoted by the seed which germinates on the tree with sharp foot-long spine. This eventually falls upright into the ooze or is floated away to establish new thickets on tidal bars or shores. In many places the MANGROVE thickets become pure forests of large trees.

The heartwood is light red, deepening to dark red or reddish brown, sometimes purplish. It ranges from uniform to more or less striped. It is fairly well defined from the yellowish, grayish or pinkish sapwood, which often is thick. It is strong, hard, tough and heavy; specific gravity 0.95 to 1.12. It is fine-textured and the grain straight to irregular. It is difficult to cut, tends to warp and twist, but finishes well and takes a high polish.

It is used for many purposes where it is available and other woods are scarce. It is not a probable import wood for either lumber or veneer purposes.

Other names:
MANGLE, Spain; PALETUVIER, France; MANGUE, Portugal; CANDELON, Mexico; PURGUA, Venezuela; MANGRO, Surinam; MANGUE BRAVO, Brazil.

Other woods called MANGROVE: Avicennia sp.—Black mangrove, Conocarpus erecta—Button mangrove, Parathesis sp.—Red mangrove.



NEW STREAMLINED
Northfield
20" - 27" - 32" and 36"
BAND SAWS

The new Northfield Band Saws have been redesigned for streamlined appearance and for better than ever performance. They combine up to the minute design features, with traditional Northfield quality in every detail.

For speed, for precision, for dependability, for appearance, for *value*, you couldn't make a better choice.

✓ FOR SPEED WITH PRECISION
✓ FOR AVANCED DESIGN
✓ FOR DEPENDABILITY

HIGH SPEED PRECISION
- Band Saws
- Surfacers
- Wood Shapers
- Jointers
- Saw Tables
- Universal Woodworkers
- Mortisers (Chain & Hollow Chisel)

The NORTHFIELD Guarantee
We guarantee perfect satisfaction to anyone who may purchase our machines, and if any reasonable exceptions are taken to their good performance, they may be returned at our expense.

WRITE TODAY FOR MORE INFORMATION

Northfield FOUNDRY & MACHINE CO.
★ ★ ★ NORTHFIELD, MINNESOTA, U. S. A.

Looking for Help —or a New Job?

You reach the right people in the right places—get best results—when you advertise in the

WOOD & WOOD PRODUCTS TRADING POST

See Page 80

Tell our advertisers you saw it in **WOOD *and* WOOD PRODUCTS**

FOUR ANSWERS TO YOUR LAMINATING PROBLEMS

We've taken your production problems . . . and designed machines to answer those problems. In hundreds of progressive plants throughout the world, the four presses shown here are the basis for modern production techniques in moderate pressure bonding operations. Perhaps one of these job-engineered presses will answer your laminating problem. The specific product bulletins will give you more detailed information. Write for them today!

AIR HOSE LAMINATING PRESS—BULLETIN 11-D

For cost-conscious manufacturers—a high production press for moderate pressure bonding with vinyl and other adhesives. Platen size 30″ x 30″ to 54″ x 120″.

ROTARY PRESS—BULLETIN 11-C

The ideal press to laminate dissimilar plies when bonding with *rubber base instant contact bond adhesive*. Roll widths to 62″; pressing speeds 10 to 60 FPM; max. pressure 7500 lbs.

MOTORIZED LAMINATING PRESS—BULLETIN 11-E

A rugged and dependable laminating press for use with all kinds of cold glue. It's especially popular for laminating composition board, flush doors and plastic laminates and can be used with or without retaining clamps. Capacities 36″ x 36″ to 48″ x 120″.

HYDRAULIC LAMINATING PRESS—BULLETIN 11-P

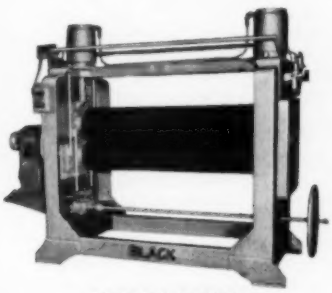
Preferred for laboratory, experimental and light production work. Standard sizes from 1 to 12 sq. ft. Pressures to 100 tons.

THE BLACK BROTHERS COMPANY, INC.

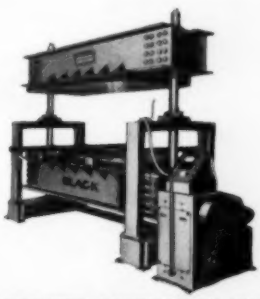
MENDOTA 5, ILLINOIS

BLACK BROTHERS COLD PRESSES

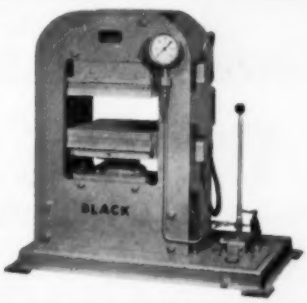
AIR HOSE LAMINATING PRESS



ROTARY PRESS



MOTORIZED LAMINATING PRESS



HYDRAULIC LAMINATING PRESS

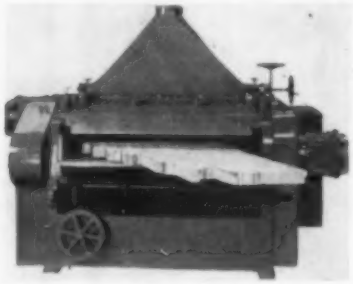
NEW and IMPROVED PRODUCTS

Dovetail Jointer

MFR.: Muskegon Machine Co., Inc., Dept. WP, Newburgh, N.Y.
DESCRIPTION: "Linderman Process" machine for welding ends of two pieces of lumber by double dovetail tapered joint.
FEATURES: Makes nominal 8-in. stock out of two pieces of 1 x4, in a single machine operation. Pieces are fed from opposite ends, and machine automatically straightens, joints, glues, and assembles at rate of up to 80 ft. of joint per minute. Both kiln-dried and air-dried (even as high as 19% moisture content) lumber have been used successfully.

59 In. Double Surfacer

MFR.: Buss Machine Works, Dept. WP, 244 8th St., Holland, Mich.
DESCRIPTION: Double surfacer with 59 in. cutting width, standard model.
FEATURES: With 59 in. cutting width and 100 HP on feed and cutterhead motors, is capable of taking cuts of 1½ in. on upper cutterhead and 1 in. on lower, thus permitting feeding through complete curved structural members up to full 59 in. Other features: motors direct on arbors; complete heavy grinding rails to grind knives in the heads; quick adjustment, one-shot lubrication system; variable feed (either slow or fast); cast steel sectional roll and chip-breakers; very sturdy, semi-steel, heavily ribbed frame.



Lumber End Sealer

MFR.: Chapman Chemical Co., Dept. WP, P.O. Box 138, Memphis 1, Tenn.
DESCRIPTION: Sealtite End-Coating to prevent end-checks in logs and lumber.
FEATURES: Seals end grain of wood but allows moisture to escape evenly during air or kiln drying, so logs can be cold-decked safely and lumber can be kept in drying yards longer. Coating is low in cost, and applied by spray, brush, or swab. Available in 52-gal. drums, as clear liquid, or in red and green colors.

Sandwich Panel Adhesives

MFR.: Minnesota Mining & Mfg. Co., Adhesives & Coating Div., Dept. WP, 411 Piquette Ave., Detroit 2, Mich.
DESCRIPTION: EC-1177 and EC-1415, resin-type thermosetting adhesives for honeycomb sandwich construction.
FEATURES: Used for bonding impregnated kraft paper honeycomb to thin aluminum, stainless steel, or magnesium sheeting. Typical applications include floors, table tops, partitions, and walls. Tests indicate they have high tensile strength, and resistance to temperature and humidity extremes. Both are transparent, have synthetic

Continued on Page 44

BOX PLANT HAS NO DUST CONTROL PROBLEM

DIXIE
MANUFACTURING CO., INC.
1514 W. Patapsco Ave.
BALTIMORE 30, MD.

When Dreyer Box Co., of Baltimore, rebuilt their plant after a disastrous fire, they turned to Dixie to design, fabricate and install their complete dust collecting system. Shown below are the three Dixie fans which send plant waste to the collectors in the background. A clean, efficient plant is the result. Inset shows Dixie fan and cyclone designed to load trucks with wood waste quickly and easily from storage bins.

Let a Dixie engineer give you the advantage of Dixie's advanced thinking on dust control problems. There's no obligation. Write today.

copied....never equaled

THE SMITH ENDLESS BED DRUM SANDER

C-505 MODEL

Progress and H. B. Smith Machine Co. go together. Continuous development and engineering have resulted in the highest quality sanding obtainable.

H. B. Smith Co. has specialized in endless bed drum sanders for 60 years — since 1896. When H. B. Smith Machine Co. introduced the first endless bed drum sander to the woodworking industry — another traditional first was accomplished.

Self-oscillating drum mechanism, exclusive with Smith. Simple positive bed adjustment, exclusive with Smith. Simple positive drum adjustment, exclusive with Smith.

These and many other features are found only on the H. B. Smith Machine Co. endless bed drum sanders.

You owe it to the quality of your production to investigate the H. B. Smith Machine Co. 2, 3 and 4 drum endless bed sanders.

Ask about our lease plan

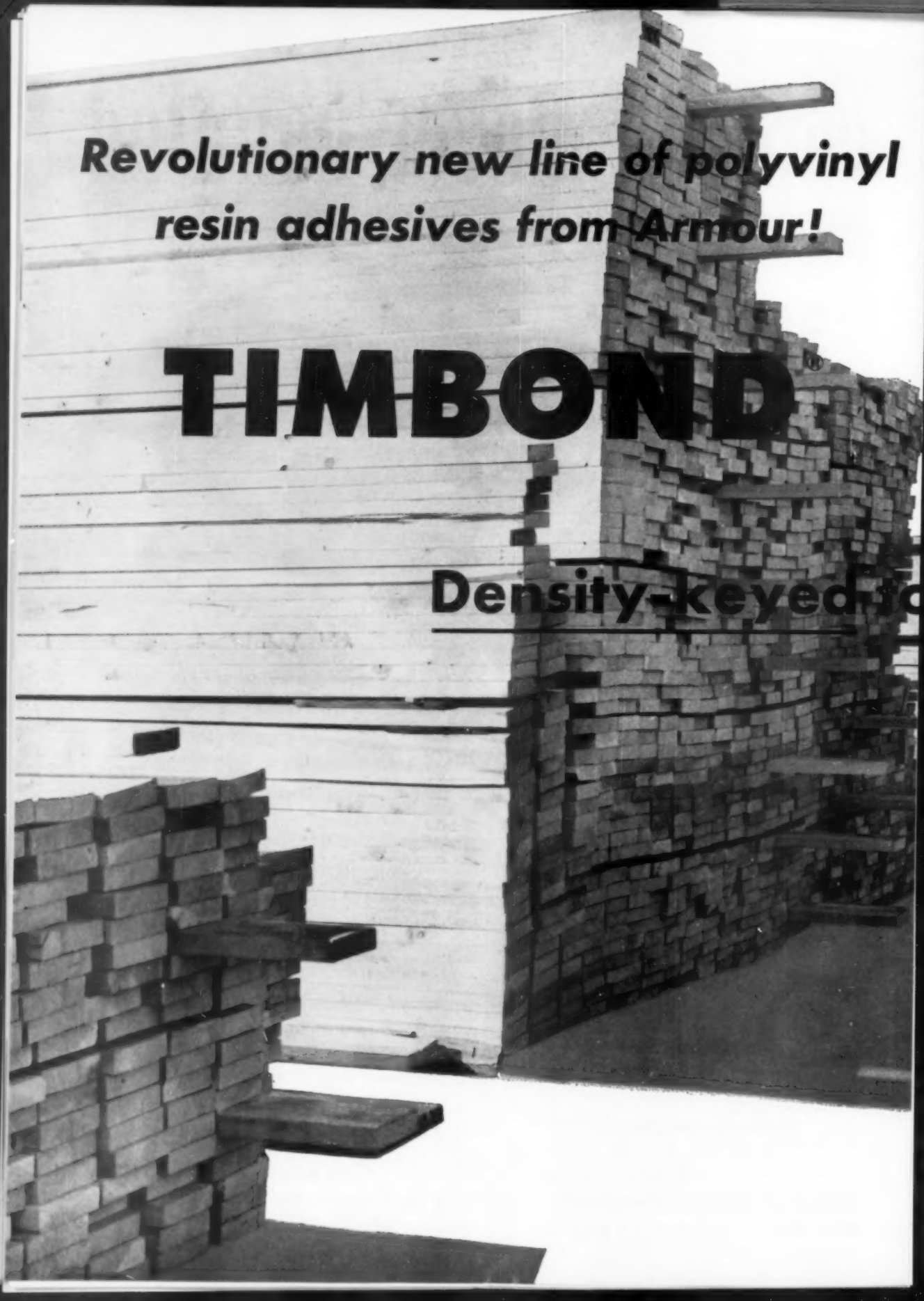
Write today for descriptive literature

H. B. SMITH MACHINE COMPANY

Smithville, Burlington County, N. J.

Woodworking Machinery Since 1847

"First in Progress — First in Economy — First in Service"

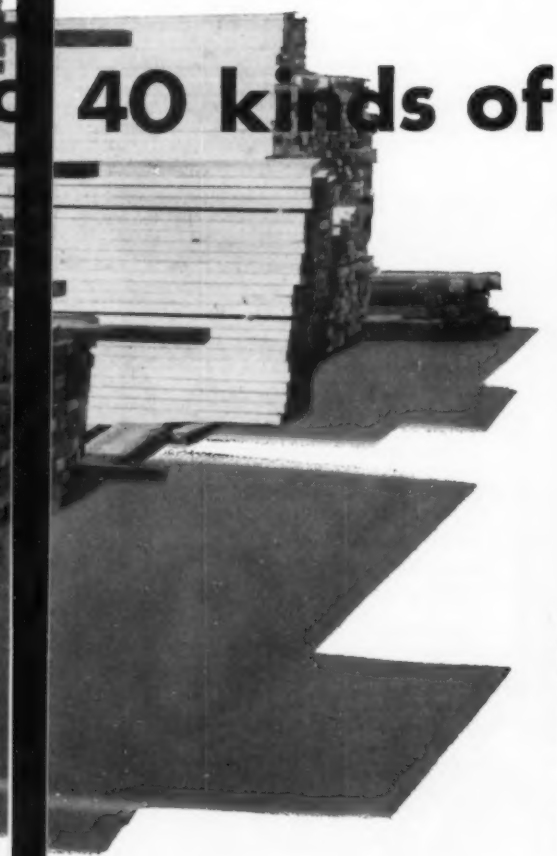

Revolutionary new line of polyvinyl resin adhesives from Armour!
TIMBOND
Density-keyed

HERE, at last, is the answer to the problem, "Which glue is right for the woods I use?" Glues that are too weak result in poor bonds and joint separations. Glues that are too strong are an unnecessary expense. Now for the first time you can order the polyvinyl resin adhesive that's keyed to the densities of the woods you use. Called TIMBOND, this new Armour line of density-keyed adhesives was developed after extensive testing with 40 different woods. This research proved that because of cellular and density differences, different woods require adhesives of varying strength. With the new TIMBOND line, you are assured of maximum adhesive performance for every kind of wood you use—at maximum economy!

Armour's new TIMBOND polyvinyls dry quickly into tough, odorless, mold-proof, vermin-proof, water-resistant, light-colored films. And each new TIMBOND produces a bond of superior strength and shock resistance equal to or greater than the strength of the woods it's designed for. The TIMBONDS are supplied ready for use. No diluting or heating is necessary. Application can be made by roller, glue gun or brush. Stability is substantially unchanged after three cycles of freezing and thawing.

Mail this coupon today. Simply designate the wood or woods you use. We will send you product and ordering data on the TIMBOND adhesive which is *density-keyed* to your woods.

40 kinds of wood!



ARMOUR *Adhesive Division*

Makers of a complete line of adhesives for woodworking—chrome glues, hide glues, liquid hide glues, polyvinyl resin emulsions

Armour and Company • 1355 West 31st Street • Chicago 9, Ill.
Delaware and Spring Garden Streets • Philadelphia 23, Pa.
290 Rutherford Avenue • Charlestown 29, Massachusetts
120 Broadway • New York 5, New York
2501 83rd Street • North Bergen, New Jersey
235 South Hamilton Street • High Point, North Carolina

CLIP AND MAIL TODAY!

Armour and Company,
1355 West 31st Street, Chicago 9, Illinois
I would like further information on TIMBOND.

I use..... in my woodworking operations.
(name of wood or woods)

Name.....*Title*.....

Firm.....

Address.....

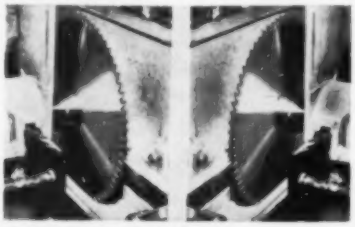
City.....*Zone*.....*State*.....

P3

resin base, but EC-1177, of heavier consistency, must be diluted for spraying.

Spray Gun

MFR.: The DeVilbiss Co., Dept. WP, 300 Phillips Ave., Toledo 1, O.
DESCRIPTION: Spray gun, model P-CGA, used where limited amount of compressed air is available.
FEATURES: Has pressure-cast aluminum gun body, stainless steel fluid needle and hardened alloy steel fluid tip. Has one-quart metal cup, and produces good results even when using compressor as small as ¼ HP. Flick of knob converts from suction feed, for light bodied materials, to pressure feed for primer finishes or other heavy bodied materials requiring heavy spray pattern.

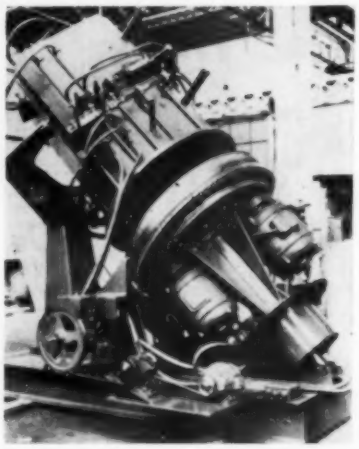


Paired Saw Blades

MFR.: DeLuxe Saw & Tool Co., Dept. WP, High Point, N. C.
DESCRIPTION: "Karbide-King Trim Side," for operations where right and left hand blades are used in pairs.
FEATURES: Used in pairs for simultaneous cuttings in panel sizing, dimension trim work, double-end trim miter operations, or any work where only one side of cut is required to be smooth and chip-free. Blades employ new design rendering finer finish with fewer teeth, and are made for both hand and power feed machines.

Wood Chipping Machine

MFR.: Guilliet Co., Auxerre, France, c/o Council on Public Relations, Inc., 366 Madison Ave., N.Y.
DESCRIPTION: Wood chipping machine to produce chips as thin as 1/100 of inch.
FEATURES: Handles various forms of woods, such as round timber, small wood, split logs, slabs, and sawmill residues. Adjustments allow it to produce shavings of almost any size and shape, from very fine wood flour to



chips of 2 in. long and 0.1 in. thickness or more. Output up to 6 tons per hour is achieved on 2 in. long, 0.025 in. thick, chips; capacity decreasing with use of small waste wood and production of thinner chips. Weighing about 6 tons, unit is 10 ft. high, 10½

ROGERS
KNIFE GRINDERS

SIZES:
32" to 180"
with
Reversing Motor Table Drive

GRINDING WHEELS:
14" to 16" Segmental or Cup Type

MOTORS:
5 H.P. to 7½ H.P. Special H.D. Ball Bearing
(Larger motors and wheels on special order)

Manufacturers of Knife & Face Grinding Equipment
SINCE 1887

SAMUEL C. ROGERS & CO., INC.
2070 SHERIDAN DRIVE BUFFALO 23, N. Y.

We are prepared to
supply your requirements
right through the year

PONDEROSA PINE • SUGAR PINE
DOUGLAS FIR • WHITE FIR
INCENSE CEDAR

Mouldings and Interior Trim
Jambs • Frames • Incense Cedar
Venetian Blind Slats • Glued-up Panels
Cut Stock • Box Shook

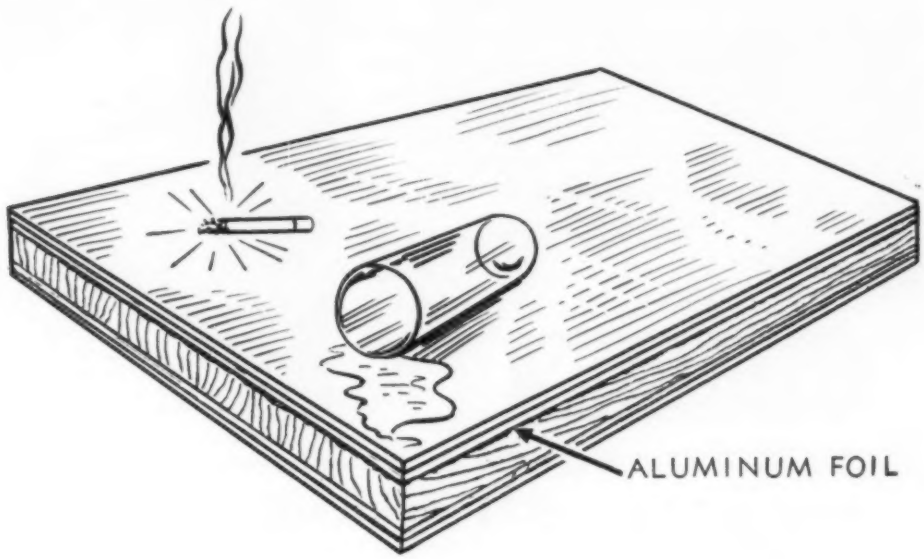
OUR SPECIALTY • MIXED CARS TO THE TRADE

The Ralph L.
SMITH
Lumber Company

Mills at Anderson, Red Bluff,
Castella & Wildwood, California

Sales Office at Anderson, California

One of the nation's large hardwood plywood producers offers you:



"BEAUTYGUARD"

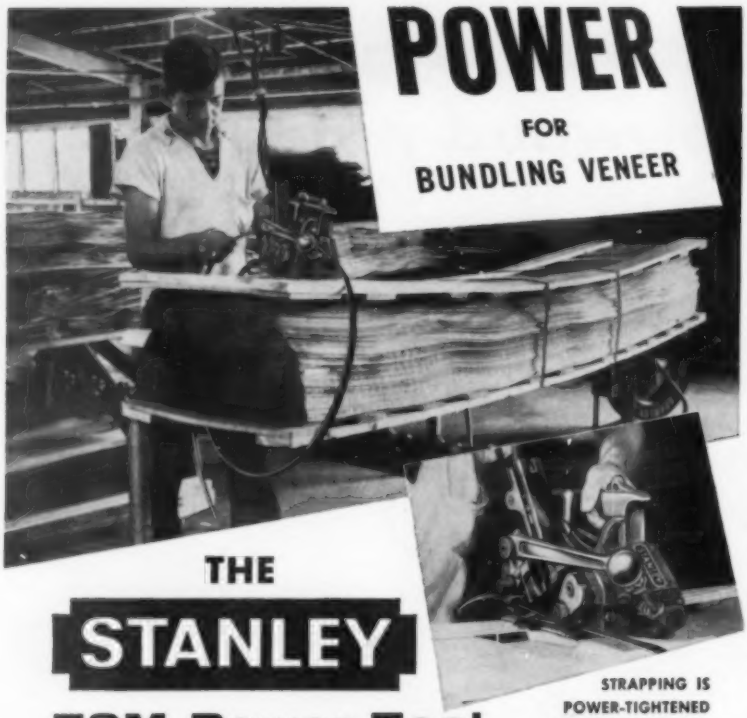
Developed by the Fine Hardwoods Association—"Beautyguard" plywood is available with all the abuse resistant features of Plastic face plywood at a much, much lower cost. This makes possible the identical colors, textures and glosses over an entire piece.

"Beautyguard" is made in Birch, Maple, Walnut, Mahogany, Cherry and other woods as required. Write for details.

JAMESTOWN *Quality Hardwood* PLYWOOD

Still available and still "the most" is the "JAMESTOWNER" NON-WARPING CABINET DOOR in Birch and Maple.

JAMESTOWN VENEER and PLYWOOD CORPORATION
Jamestown, New York



POWER
FOR
BUNDLING VENEER

THE
STANLEY
ESM Power Tool
and STEEL STRAPPING

STRAPPING IS POWER-TIGHTENED TO PRE-SET TENSION

FRANK M. ADAMS, SUPERINTENDENT OF ROBERTS & STRACK VENEER CO., INC., NEW ALBANY, INDIANA, SAYS – STANLEY STEEL STRAPPING TEAMED UP WITH THE STANLEY ESM POWER TOOL BROUGHT THESE IMPORTANT ADVANTAGES . . .

Better protected, more compact, uniform, strongly strapped bundles with less operator fatigue.

Virtually no breakage or damage in shipment – by truck and rail – all over the United States and into Canada.

Easier handling. "Uni-Tieing" veneer strips into bundles – 100 to 500 lbs – permits speedy movement by overhead conveyor to distant storage point.

"Immeasurable" dividends in customer satisfaction and good will.

Mail coupon for free catalog and special lumber folder showing how "Uni-Tieing" dimensional lumber, sheathing, veneer strips, flooring, specialty lumber, etc., with Stanley Steel Strapping saves time and money at mill or yard.

STANLEY INSURE IT – SECURE IT WITH STANLEY STEEL STRAPPING

STEEL STRAPPING DIVISION
THE STANLEY WORKS

Stanley Steel Strapping Division, Dept. C, 1223 Lake St., New Britain, Conn.
Telephone: BAldwin 9-2021

☐ *Please send Lumber Folder (SS-4) and Catalog (SS-9C).*
☐ *Please have Representative call.*

NAME _____
POSITION _____
COMPANY _____
CO. ADDRESS _____
CITY _____ ZONE ____ STATE _____

Stanley Tools • Stanley Hardware • Stanley Electric Tools • Stanley Steel Strapping • Stanley Steel

ft. long, and 6 ft. 7 in. wide. Operates with two 30 HP and one 1.5 HP electric motors.

Bayonet Saw

MFR.: Porter-Cable Machine Co., Dept. WP, 68 Exchange St., Syracuse, N.Y.
DESCRIPTION: Model 148 bayonet saw with orbital motion.
FEATURES: Machine is heavy duty, with 3.5 amp. motor, low cost, and fast in cutting plastics, ferrous and non-ferrous metals, and all kinds of woods and plywoods. Blade teeth are in contact only on the up or cutting stroke and they back away on the release stroke—this cuts heat and friction, and increases blade life up to 30 times. Saw has full 2 in. capacity in wood, ¾ in. in aluminum and ¼ in. in steel, and cuts at 4250 strokes per minute. Plunge cuts are made without preliminary starting holes, handle keeps cool, and blower keeps line of cut free of sawdust. Standard equipment includes package of blades, base insert for cutting plywood veneer, wrench, grease and manual.

Lift Jack System

MFR.: Hamilton Caster & Mfg. Co., Dept. WP, 1700 Dixie Highway, Hamilton, O.
DESCRIPTION: Lift jack and engaging bracket, used with semi-live platforms, the Roll-N-Stor System.
FEATURES: One or more lift jacks can be used with any number of skid trucks, thus giving flexible handling of materials. When not in use, both jacks and trucks are stored easily. Platforms available in wide range of sizes and 3 types of wheels: all-metal, rubber-tired, or molded plastic.

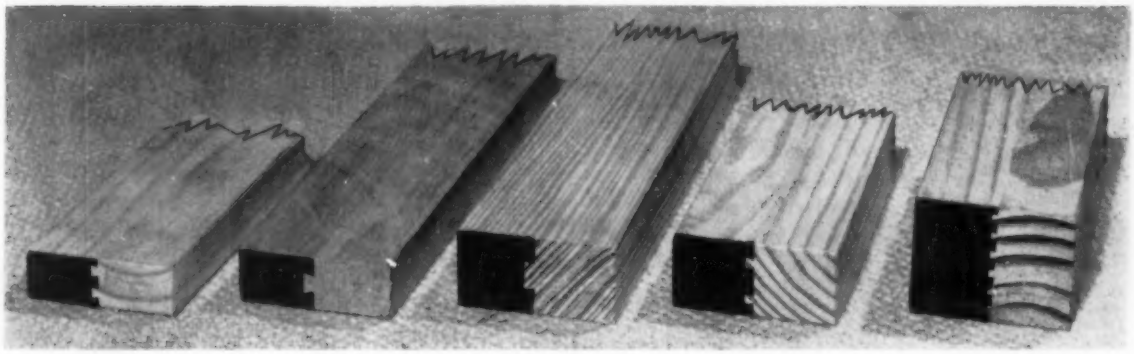
Craze-Resistant Glue

MFR.: Catalin Corp. of America, Dept. WP, 1 Park Ave., New York 16, N.Y.
DESCRIPTION: Catalin Resin 8666, new liquid modified Urea-formaldehyde adhesive resin.
FEATURES: Gives the unusual craze-resistant quality required where lack

Use the "Linderman Process"

FOR CONTINUOUS PRODUCTION OF ALL KINDS OF LUMBER

WITH Tapered Dovetail Joints — Gluing — Assembling
WITHOUT Clamps — Presses — Hot Beds



4/4 4/4 5/4 5/4 6/4 Resaw

Machines Available in Three General Types

STANDARD TYPE MACHINE . . . Designed to use straight edge lumber 4/4 to 8/4, in lengths from 10" to 100" **without** an extra preparatory edging operation, since Linderman Machines will handle curve and irregularity variations up to 3/8". Depth of joint requires only 3/32" to 3/16" depending on joint specifications.

BARK EDGER TYPE MACHINE . . . Designed to use bark edged lumber with a minimum of waste. All other operations of Standard Machine follow immediately without further handling. Bark edging then, in reality, becomes a "bonus" operation.

PNEUMATIC STRAIGHTENER TYPE MACHINE . . . Designed to use 1" x 4" straight edged lumber in lengths up ao 16 ft. This machine automatically removes edgewise bend, joints, glues, and assembles two pieces into a straight 1" x 8" board. An air operated Straightening Device at each end of the machine performs the straightening operation.

PRODUCTION varies with thickness and width of lumber used, but an average figure would be 60 to 80 ft. of completed joint per minute.

Uses of Linderman Process Jointed Lumber

ACCEPTED USES IN BUILDING CONSTRUCTION

- Sheathing—8" and 12"
- Novelty or Drop Siding
- Stair Treads
- Dimension Panels
- Interior Trim

OTHER USES

- Unpainted Furniture
- Caskets
- Hardwood Butcher Blocks
- Cutting Tables
- Boxes and Shooks including those covered by Government specifications
- and many other uses.

WRITE FOR DETAILS, INCLUDING INFORMATION CONCERNING YOUR SPECIFIC PROBLEM

MUSKEGON MACHINE CO., INC.

NEWBURGH, NEW YORK

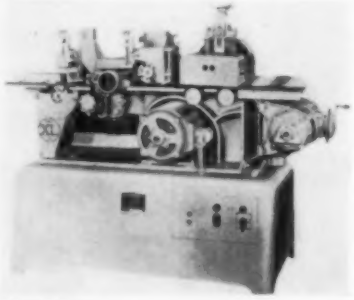
of adequate clamping pressure or irregularity of contacting surfaces make it impossible to obtain thin uniform glue lines. Best suited to gluing wooden structures, edge bonding, cabinet work, and bonding decorative laminates and hardboard.

Strapping Table Top

MFR.: Signode Steel Strapping Co., Dept. WP, 2600 N. Western Ave., Chicago 47, Ill.
DESCRIPTION: Table top with inset ball casters to permit easy rotating while strapping package.
FEATURES: May be mounted on permanent or portable base or in conveyor lines, and metal strap guide, optional equipment, facilitates strap feeding. Constructed of metal-clad Haskelite containing 61 one-in. ball casters, which extend ¾ in. above surface and are mounted in staggered pattern on 3 in. centers. Handling packages thus requires minimum of effort, serves as safety factor as well as labor-saver. Gross weight is 37 lbs.; size is 36 x 36 in.

Wood Refuse Stoker

MFR.: American Coal Burner & Wood Stoker Corp., Dept. WP, 18 E. Erie St., Chicago 11, Ill.
DESCRIPTION: Industrial wood refuse fuel stoker, Fyr-Feeder Model ZD-56.
FEATURES: Can be applied through front of existing boiler and arranged to extract and measure fuel from storage bin, or can be equipped with transfer hopper to receive fuel from present conveyor or blow pipe system. Burns wet or dry hogged wood, planer shavings, chips, or bark. Of simple operation, stoker can also be used in conjunction with supplementary coal, gas or oil.

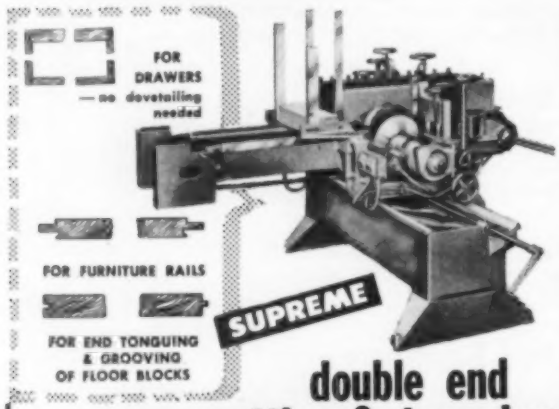


Moulder

MFR.: Smithway Machine Co., Dept. WP, 4617 Airport Way, Seattle 8, Wash.
DESCRIPTION: XL "Moldmatcher," in model 40 with 2 x 4 in. capacity, and model 60 with 2 x 6 in. capacity.
FEATURES: Has completely new frame design which renders better moulding finish, higher rates of feed, greater strength and rigidity. Also has new high-efficiency feed drive system, side head motor relocated on the base, and faster, more accessible adjustments.

Postforming Equipment

MFR.: R. A. MacDonald Co., Dept. WP, 7727 Case Ave., Sun Valley, Calif.
DESCRIPTION: "Thermobond," increment postforming equipment to form



double end cross-cutting & tenoning machine

- Cuts off, tenons and copes both ends at one time
- Automatic accurate operation
- Even unskilled operator gets maximum performance
- Perfect for low cost production of drawers (no dovetailing needed), furniture rails, end tonguing and grooving of floor blocks, etc.

WRITE TODAY FOR ILLUSTRATED LITERATURE
SUPREME WOODWORKING MACHINERY CORP.
50-52 Howard St., New York 13, N. Y.

STOP THAT CUSSIN'!

3 of your dry kiln problems can be whipped by these remarkable new Universal products

1 ***Uni-Seal*** **KILN DOOR GASKET**
A new formula butyl rubber —resistant to heat and oxidation. *Lasts several times as long* as gaskets previously used.
it LASTS!

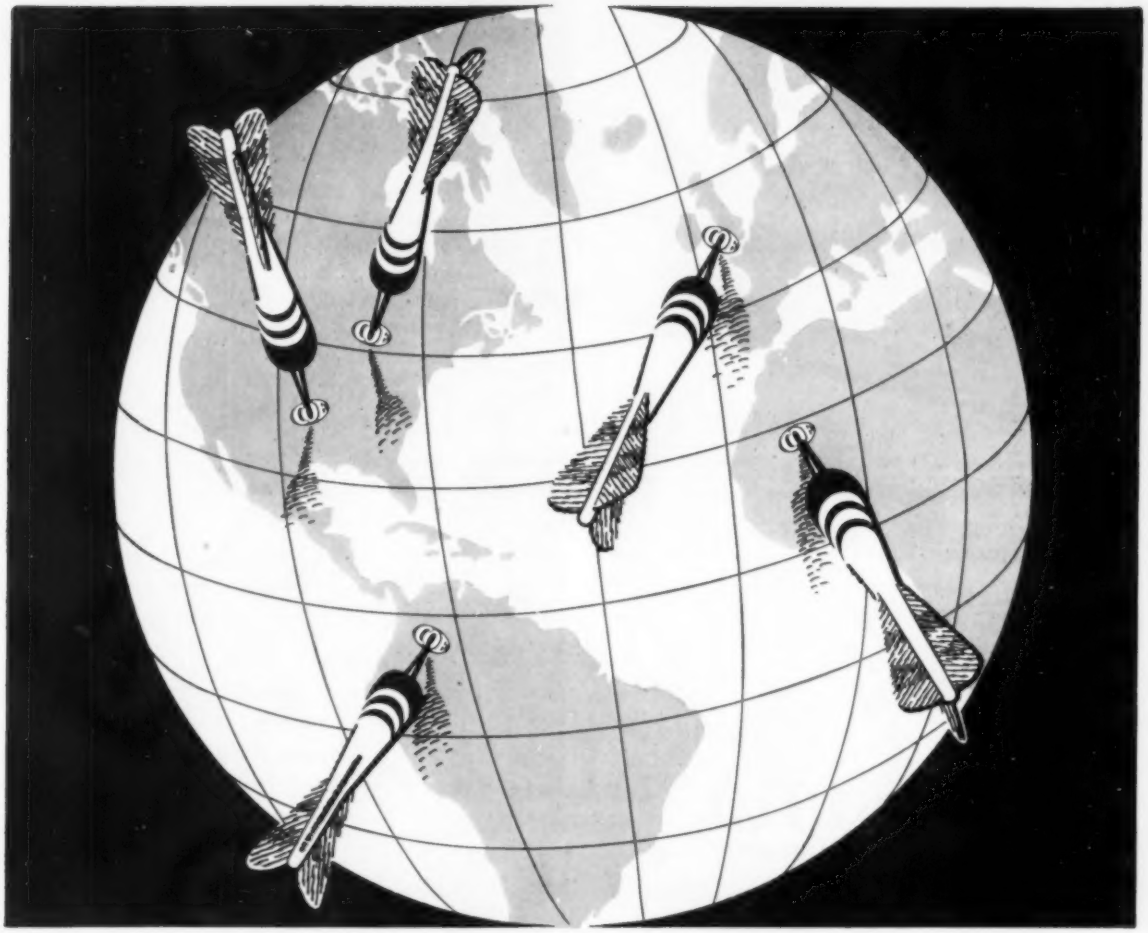
2 ***Uni-Seal*** **DOOR GASKET CEMENT**
A new specialized adhesive for bonding rubber to steel. Tough, resilient, waterproof. *Holds for the life of the gasket.*
STAYS STUCK!

3 ***Uni-Coat*** **RUST PREVENTIVE COATING**
Amazingly tough, stable, impermeable compound of new synthetic resins. It "armors" steel against heat, steam, and most corrosive chemicals.
it REALLY STOPS RUST!

(Ask for the "3 Corkers" folder.)

by the makers of the famous
Universal
KILN DOORS and DOOR CARRIERS

UNIVERSAL DOOR CARRIER, INC.
1117 Cornell Ave., Indianapolis 2, Indiana
"SPECIALISTS IN KILN CLOSURE EQUIPMENT—SINCE 1904"



A DART GAME for Veneer Producers

Take five darts and throw them at a map of the world. It would be pretty hard to miss hitting at least one area where veneer is cut. The ones above landed in Africa, England, South America and the United States. The chances are that a Coe lathe is busily at work not far from each spot.

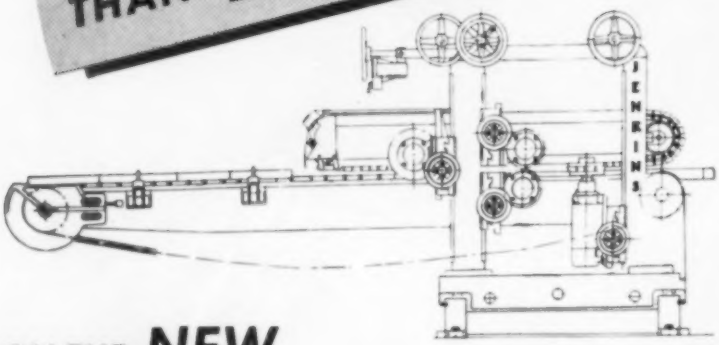
Wherever veneer is cut, whether it be birch, cativo, fir, gum, limba, mahogany or most any other species, you will find the Coe name on the lathes, clippers, dryers and knife grinders being used. This world-wide acceptance comes from a sound basic design adapted to fit the particular requirements of each individual plant.

Do you have a problem with which to test us?

The COE MFG. Company
PAINESVILLE, OHIO

LATHES • CLIPPERS • DRYERS • KNIFE GRINDERS

NOW
TRIM, TENON and COPE
FASTER, MORE ACCURATELY
THAN EVER BEFORE!!



ON THE *NEW*
Jenkins 192 DOUBLE END MACHINE

Completely New, . . . the new Jenkins design offers many advantages . . . in addition to price!

HIGHER SPEEDS and ACCURACY

The new feed shaft position over the Saddle and Rail Base eliminates vibrations, torsions, and breakage at new high speeds. Machine squares assured. No awkward overhanging mounts to interfere with material handling.

MORE EFFICIENT VARI-SPEED DRIVE

Now you can drive the Oilomatic Piston Type Chain through the highest speeds yet attained, with infinite speed variations. New Jenkins Chain Return Device assures smooth action at any speed.

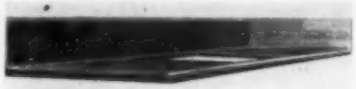
WIDER RANGE OF CUTTER POSITIONING

180° Tilting Trims and Copes mean you can cut above and below chain level. Two sturdy stands provide full length ways, and more room to work in for Faster Setup . . . of the heaviest motors.

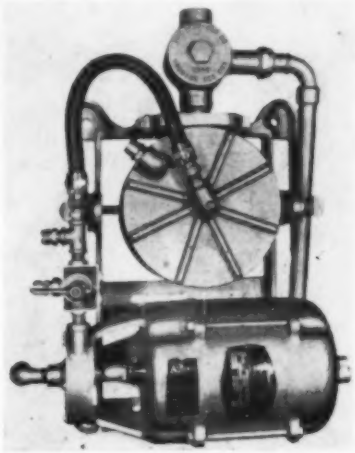
Jenkins WOODWORKING MACHINERY DIVISION
DEPT. WW
Curt G. Joa, Inc. SHEBOYGAN FALLS, WISC.

plastic tops to surfaces before or after lamination.

FEATURES: Small cove radii may be formed, and temperatures are held to



¼ of 1 degree along entire length to insure good forming. Heating is by induction.

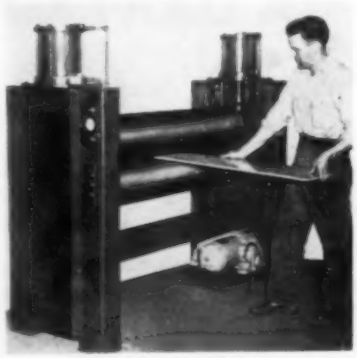


Sprayer With Color Changes

MFR.: Spee-Flo Co., Dept. WP, 720 Polk Ave., Houston, Texas.

DESCRIPTION: "Circaflo Special" hot spray unit with quick change color selector system.

FEATURES: Clean-out and color change takes less than a minute, allowing frequent color changes. Thus, one machine serves in place of several individual heaters.



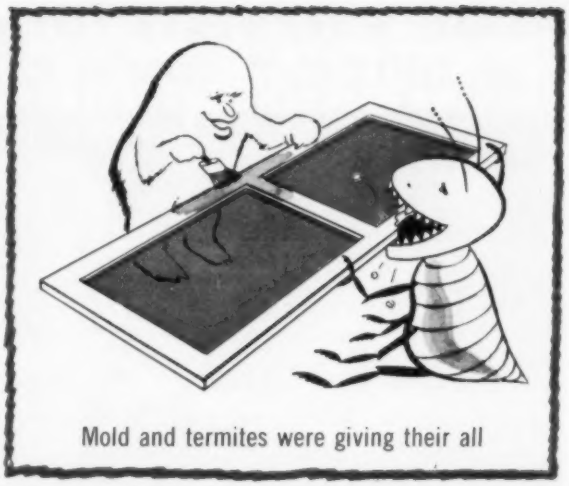
Rotary Laminating Press

MFR.: Rodney Hunt Machine Co., Dept. WP, Orange, Mass.

DESCRIPTION: "Wring-Master" rotary laminating press.

FEATURES: Provided with positive nip adjustment for precise setting of pressure roll gap for panel thickness up to 5 in. With gap set, machine can be left in operation; panels are automatically pulled through the press at speeds ranging from 15 ft. to 30 ft. per minute as they are inserted in the

Stain and mildew were having a ball



Mold and termites were giving their all

'Til the boss discovered they couldn't mar

Millwork protected with PENTA-WR

Get full protection with **Chapman Penta-WR**

WATER REPELLENT WOOD PRESERVATIVE

Your millwork will stay bright, clean and new-looking longer if you treat it with Chapman PENTA-WR. This improved preservative with a full 5% PENTAchlorophenol content prevents stain, mold and mildew damage and gives lifetime resistance to insect attack. The superior water-repellent chemicals used in Chapman PENTA-WR reduce swelling and shrinking to a minimum.

You save, too, when you use Chapman PENTA-WR, by specifying the type solution most economical for your operation (ready-to-use or concentrates of 1-to-3 or 1-to-5). There's a Chapman warehouse or plant near you (even in Canada and Mexico) so you usually pay lower transportation charges and get faster delivery. Write for complete technical data and prices.

CHAPMAN® **PENTA-WR**

MEETS FEDERAL SPECIFICATION TT-W-572 AND MILITARY SPECIFICATIONS

CHAPMAN CHEMICAL COMPANY
Leading manufacturer of wood preservatives
Memphis 1, Tennessee

WATER REPELLENT PRESERVATIVE
APPROVED
NATL. WOODWORK MFRS. ASSN.

HANDLE MORE BOARD FEET PER DAY with LEITELT LUMBER LIFTS

LENOIR FURNITURE COMPANY, LENOIR, N. C.

Users of LEITELT LUMBER LIFTS have reported these production gains:

LIFTS INSTALLED AT	PRODUCTION INCREASES
Double Surfacers	40% to 75%
Rip saws	30% to 60%
Cut-off saws	20% to 50%
Matchers and Edgers	20% to 40%
Stacking Kiln Trucks	50% to 100%
Box Car Loading	25% to 50%

Whether you're handling lumber in the yard or plant, efficient handling starts with a Leitelt Lumber Lift.

The many unexcelled features afforded by Leitelt equipment give a steady-paced flow of lumber at your first machine operation — thus maintaining a constant flow of stock through subsequent machines at a rate corresponding to their production capacities. This in itself is very important particularly where mechanized and conveyorized production set-ups can move more board feet than ever before.

Leitelt Lumber Lifts also work for you by saving manpower and relieving labor shortages. One man can handle a Leitelt Lumber Lift, feeding stock into single or double line systems.

Leitelt Lumber Lifts are available in a complete range of sizes to handle loads from 3 to 30 tons safely and easily. Each Lift is made to fit your particular handling specifications.

Write LEITELT today for more complete information.

LEITELT IRON WORKS
SINCE 1862
"Pioneer Builders of Lumber Handling Equipment"
335 Mill St., • Grand Rapids 2, Michigan
Manufacturers of Lumber Lifts, Car Pullers, Power Driven Turntables, Subsets and LEITELT Swing Tables

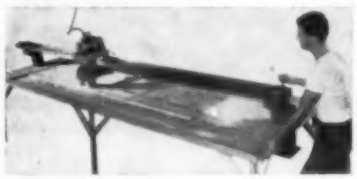
nip. A 2½ in. diameter Neoprene-covered stabilizing roll mounted immediately behind nip prevents fluttering of rigid panels passing through. Unit can be loaded up to 8000 lbs. with 8 in. diameter direct acting pneumatic cylinders, and may be increased with other cylinders.

Miter Cutting Saw

MFR.: Irvington Machine Works, Dept. WP, 1808 NE 7th Ave., Portland 12, Ore.

DESCRIPTION: No. 32 single angle precision miter cutting saw.

FEATURES: Table, calibrated in degrees to 45° right and left, locks firmly into position. In operation, motor serves as counterweight to balance machine. Saw is raised out of cut by coil spring, and saw and belt are fully guarded for safety.



Panel Saw

MFR.: Servi Corp., Dept. WP, Constantine 9, Mich.

DESCRIPTION: "Long-Kut," long railed panel saw for large sheets of material.

FEATURES: Has ball bearing carriage on which is mounted an electric motor with 10-in. circular saw blade. Can be tilted to 45° angle, and is available in cutting lengths from 4 to 9 ft. Will accurately cut plywood, plastic, non-ferrous metal, flush doors, sink tops, and other large sheets of material.

Sander Dressing Stick

MFR.: Banes Marine Co., Dept. WP, 154 Randolph Place, West Orange, N. J.

DESCRIPTION: "San-Kleen" dressing stick for cleaning sanding belts and discs.

FEATURES: Paint, varnish, and fine wood chips are pulled out of the grit by holding this dressing stick against belt or disc while it is revolving. Company claims that useless belts can quickly be reclaimed and belt life extended by 400 to 500%.

3 Bostitch stapling hammers fit every type of job

GOT A LIGHT TACKING JOB? The Bostitch H5 is a lightweight, simple hammer which drives low-cost staples rapidly and with little effort or fatigue. Loads quickly with 3/16", 1/4" or 5/16" staples.

NEED SOMETHING HEAVIER? The Bostitch H2B drives 1/4" or 3/8" staples of heavier wire. H2B½ drives ½" staples. Easy-fill magazine holds up to 160 staples.

DADDY OF THEM ALL is the Bostitch H4. Drives a rugged galvanized staple which spreads inside the wood for an anchor grip. Staple is equivalent to two 3/4" nails of 1/16" wire. One-blow operation cuts fastening time in half or better.

YOU CAN CUT COSTS by switching to stapling.
Ask your local Bostitch Economy Man to show you how.
(He's under "Bostitch" in phone directories.)
Or mail coupon.

Fasten it better and faster with

BOSTITCH®
STAPLERS AND STAPLES

BOSTITCH, 883 Mechanic Street, Westerly, R. I.

Please send me booklets explaining how I can cut costs with your

☐ **H5 Hammer** ☐ **H2B Hammer** ☐ **H4 Hammer**

Name _____

Firm _____

Address _____

City _____ *Zone* _____ *State* _____

NEW CATALOGS and LITERATURE

Craze-Resistant Glue. Catalin Corp. of America, Dept. WP, 1 Park Ave., New York 16, N.Y. 4-page technical data sheet on Catalin Resin 8666, a new liquid modified Urea-formaldehyde adhesive resin.

Waste Wood Chippers. D. J. Murray Mfg. Co., Dept. WP, Wausau, Wis. 12-page bulletin contains specifications and information on well-illustrated line of Murco Multi-Knife Chippers for pulpwood sticks, sawmill slabs or edgings, or combination of both.

Single Spindle Shaper. J. A. Fay & Egan Co., Dept. WP, 2026 Eastern Ave., Cincinnati 2, Ohio. Bulletin on model 952 ball bearing 4 speed single spindle shaper contains pictures, description and specifications.

Shipping Methods. Hinde & Dauch Dept. WP, Sandusky, O. 24-page booklet, No. 5, on "How to Ship More Economically in Corrugated Boxes" treats design, testing, storage, shipping room layout, packing, sealing, stacking, and loading.

Materials Handling. Nutting Truck & Caster Co., Dept. WP, 3856 N. Ashland Ave., Chicago 13, Ill. Bulletin announcing new BT 45 carbide tipped saw for all hand-feed and radial arm saw operations, which cuts thin kerf.

Electric Switches. Furnas Electric Co., Dept. WP, 1057 McKee St., Batavia, Ill. 48 page catalog No. 5509 containing buying information for drum controllers, foot switches, and limit switches. Included is engineering and application data, plus connection diagrams and dimensions.

Centrifugal Pump. Ingersoll-Rand Co., Dept. WP, 11 Broadway, New York 4, N.Y. Illustrated bulletin, Form 7325, outlines advantages and applications of new centrifugal pump which handles liquids containing high concentrations of solids, air, and gases.

Vertical Resaws. Prescott Co., Dept. WP, Menominee, Mich. Bulletin 1400 describes latest developments in company's vertical resaws, covering construction data, specifications, and dimensions for 5, 6, and 7 ft. models.

Edge Gluer. Ederer Engineering Co., Dept. WP, 2931 First Ave. S., Seattle 4, Wash. Specifications, close-up illustrations, and descriptions are presented in Bulletin V-105 on an infrared veneer edge gluer.

Tractor. Caterpiller Tractor Co., Dept. WP, Peoria, Ill. Bulletin No. 31555 describes and gives specifications of the new Caterpiller D9, with pictures of tractor, engine, and turbocharger.

Uses of "Presdwood." Masonite Corp., Dept. WP, 111 W. Washington St., Chicago 2 Ill. New edition of "Guide for Product Designers" describes basic and special "Presdwood" products, their properties and finishing methods.

Woodworking Manual. C. G. Monnett, Jr., Dept. WP, Route #7, Box 345, Greensboro, N.C. "Knife Grinding and Woodworking Manual" contains information on all phases of such operations, supplemented by pictures, charts, and drawings, written in simple "shop-talk" language. Price: $5.00.

Mitre-Cutting Saw. Irvington Machine Works, Dept. WP, 1808 N.E. 7th Ave., Portland 12, Ore. Specification sheet on No. 32 precision mitre-cutting saw, in both single and compound angles.

Resorcinol Resins. Synvar Corp., Dept. WP, Wilmington 99, Del. Pamphlet describes application of resorcinol-phenol-formaldehyde resins, SYNVAR-EN PLS-AA, PLS-A, PLS-1, and PLS-2 in woodworking industry.

Steel Strapping. Alleghany Steel Band Co., Dept. WP, Box 716, Pittsburgh 30, Pa. Catalog sheet describing light and heavy duty "Steelband" strapping in four styles of reel carriers and accessories, tools, and seals.

species aren't the same in respect to the yield in products considered.

Again the importance of differences in averages could not have been determined unless they were related to the variation present in the sample.

Recognition of variation and its importance is vital to success in handling figures. Realistic decisions can be made only when such information is available. Variation is the very heart of the problem of comparison involved in evaluating and controlling processes.

The most realistic objective in rough mill utilization is to control the process of conversion so that yields are maintained at a high level continuously. A controlled process is one in which variations are no greater than those we expect, than are explainable by the laws of chance. The matter of expectation is of vital importance. Yield variation greater than expected by chance alone calls for action leading to improvements.

The use of a control chart in connection with cross-cutting waste has been reported. The following example is an extension of the idea involving study of the ripping operation. In this case clear, one-face, random width material for edge gluing was being produced on a straight-line ripsaw operated at 93 f.p.m. feed. The operator was required to rip out defects and match-rip.

Waste of over 18% has been reported as occurring in ripping operations of this kind. The amount of waste expected here depends in part on the job of defect removal at the cross-cut saw, of course. However, the control desired is independent of the cross-cutting.

In this operation random width pieces averaged 3 in. wide. The operator was throwing away pieces cut out as defective that had, on the average, acceptable material almost 4/32 in. wide for the full length of the piece. The loss of usable material was 4% of that remaining in production.

Samples of four pieces at a time taken at random from discarded material were measured to obtain averages and variation used in charting the results shown in Fig. 1.

The control chart makes use of a process average and its variation. It shows how much waste is occurring and in a manner that allows effective action to be taken when the waste is excessive. There are out-of-control points showing excessive waste for samples 5 and 13. Of course, the chart gives no information on the cause. It gives the very important information of when the cause is active. In this case the operator made unacceptable errors.

A great advantage of the chart is that it provides a most suitable means of determining when attempts to improve the process are effective.

The control chart is a tool developed from the general concept of variation. Fig. 1 shows the waste variation or tolerance limits inherent in the process. Each process has such tolerance limits. This general concept is applicable throughout a wide range of production problems.

The need for specifications results from variation. Specifications, to be realistic, should be based on more than a study of subsequent assembly or service requirements. In each case there are natural process tolerances that exist due to variation imparted by factors of production.

Editor's Note.—*The foreging article is adapted from a paper presented by Mr. Wylie at the F.P.R.S., Nov. 1955, regional meeting in Chicago.*

ROCKWELL-BUILT

new DELTA saw-jointer

Delta's new big-capacity 10" Tilting Arbor Bench Saw, teamed with the Delta 6" long bed (42¼") jointer, gives you a real time and work-saving machine. It's designed to turn out jobs on a fast, cost-cutting basis—here's why:

BIG CAPACITY—New Delta saw cuts stock to 3⅛" thick, rips to the center of a 48" panel. Delta jointer cuts and rabbets stock to 6" wide, ½" deep.

TIME AND WORK SAVING—Rip stock to width, then joint it moving just one step. Use machines singly or as a one or two man operation.

PORTABLE—Move it where you need it to break bottlenecks, increase production, reduce materials handling.

SAVES SPACE—Two machines mounted on one stand and powered by one motor save valuable shop space, keep initial motor cost to a minimum.

LOW COST—Built-in quality features make this Delta team unmatched for precision—capacity—and price.

See this great new Delta Saw-Jointer—compare it! Get all the facts—then make up your own mind! Your Delta Dealer is listed under "TOOLS" in the classified pages of your phone book. Send the coupon for full details—today!

DELTA ROCKWELL

DELTA QUALITY POWER TOOLS
Another product by **Rockwell**

Send Coupon For All The Facts!

DELTA QUALITY COSTS NO MORE

Delta Power Tool Division, Rockwell Manufacturing Co.
668C North Lexington Avenue, Pittsburgh 8, Pa.

☐ Please send name of my nearest Delta Dealer.
☐ Please send Delta Industrial Catalog on new Delta Saw-Jointer.

Name _____ Title _____
Company _____
Address _____
City _____ County _____ State _____

Power Tools

Continued from Page 23

ment where heavier types of machines must be used.

Perhaps the greatest concentration of light portable machinery is in Chris-Craft's "mill assembly," a manufacturing step between the mill proper and a jointer shop. They range from large tilting arbor saws to jointers of several sizes.

In this department, for example, all types of fine sub and whole assemblies are produced. Special jigs have been contrived to produce numerous pull-and-vent panels, and step treads. Also, special tooling has developed a means of using a circular saw to round the tops of masts.

Another typical operation uses several jig saws to cut intricate instrument panels at one time with the aid of a single pattern.

One advantage of using power tools in production is that they can be moved to the work, the company reports.

As various models of water craft are being assembled—they range from small duckboats to the most complete selection of runabouts, utility boats and motor yachts—such power tools as jointers are moved to points of assembly where bulkhead building is needed.

Another example of tool portability is shown in the company's crating room. The same radial saw that is used in the mill department for cutting rough wood to size is moved to the crating room to cut stock into crating strips many times faster than previously.

How Chris-Craft sets up its manufacturing procedure is summarized in these eleven steps:

(1) Sales and management estimate the number of boats, by model, that must be made over a two-month period. This estimate is given to engineering for manufacture.

(2) The order is sent to the company's mill for cutting all parts.

(3) Parts are funneled to subassembly for frames, cabin sides, decks, cabinet work, doors, etc.

(4) On larger boats, the keel is laid in a production line stall, frames go into position, chines and sheer battens are installed, and hull sides are planked.

(5) Boat leaves the stall and the bottom is planked.

(6) First stage of jointer work: deck installation, transom planking, engine installed, bulkheads, rudders, etc.

(7) Second stage of jointer work: cabinet work, cabinet sides, paneling.

(8) Paint shop does its important finishing job.

(9) Accessories, hardware, screens and hook-ups for water test make up this final assembly step.

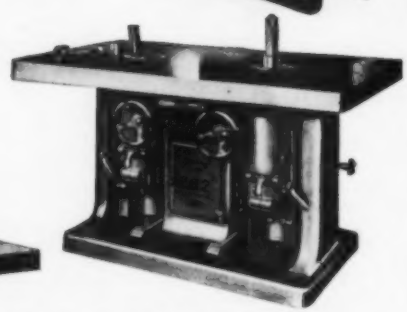
(10) The boat is launched, tested and checked prior to shipping.

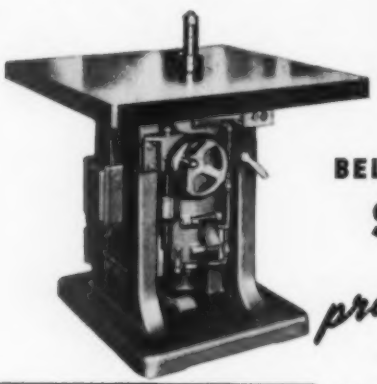
(11) On larger craft, bunks, studio lounge, carpeting and other equipment are installed.

Editor's Note.—*Data and illustrations for the foregoing article were supplied by Delta Power Tool Div., Rockwell Manufacturing Co., Pittsburgh, Pa., whose co-operation is appreciated.*

EKSTROM, CARLSON

The picture at the right shows the No. 262 ECCo Two-Spindle High Speed Shaper. Below is a picture of the No. 162 Single Spindle Shaper. Not shown is the No. 366, which is identical to the No. 262 but with a larger table and greater center distance of spindles.





BELTED, MOTOR-DRIVEN

SHAPERS

produce Quality Work at Low Cost...

CONDENSED SPECIFICATIONS			
	162	262	366
Spindle Speed	8500 rpm	8500 rpm	8500 rpm
Number of Spindles	1	2	2
Center Distance between Spindles	—	20"	30"
Vertical Spindle Adjustment	6"	6"	6"
Spindle to Front of Table	18"	18"	18"
Height, Floor to Table	35"	35"	35"
Work Table Size	38"x40"	38"x62"	38"x62"
Motor Sizes	3, 5, or 7½ hp	5 or 7½ hp	5 or 7½ hp

The solid construction and precision workmanship in ECCo Shapers pays off on the production line. Work moves past the knives with little effort on the part of the operator and comes off the machine so smooth and so beautifully shaped that sanding becomes a negligible factor. There are important places in your plant for ECCo Shapers — places where lagging production lines can be speeded up, where important pieces can be whisked out swiftly and accurately at a cost in keeping with the demand of buyers. The experience and know-how gained through five decades of serving the woodworking industry are incorporated into ECCo machines. For knives, use superior Casino Shaper Steel, finished and heat-treated by Ekstrom, Carlson to meet the exacting needs of high speed precision cutting equipment.

Write for Bulletins 162, 262, and 366

MANUFACTURERS OF QUALITY WOODWORKING MACHINERY SINCE 1904

ECCO EKSTROM, CARLSON & COMPANY

1411 RAILROAD AVENUE ■ ROCKFORD, ILLINOIS

MOULDERS • SANDERS • ROUTERS • SHAPERS • CARVERS • PANEL SIZERS • GROOVERS

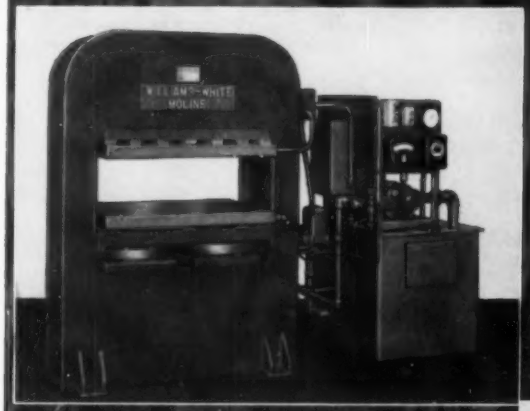
WOODICTIONARY

STUD

One of a series of slender wood structural members used as supporting elements in walls and partitions.

WILLIAMS-WHITE HOT or COLD

Laboratory & Production PRESSES

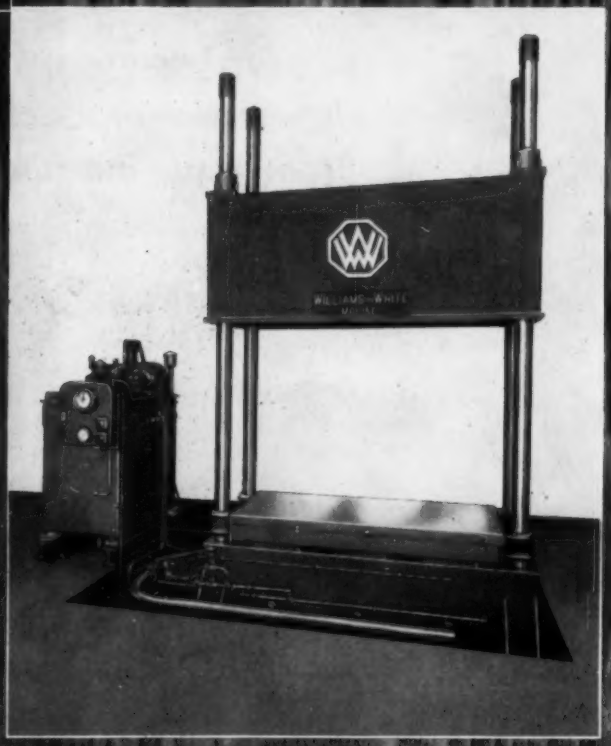


If your company is expanding or if you are "new comers" in the plywood, veneer or hardboard field, consider WILLIAMS-WHITE & CO. custom built hot or cold presses before you buy! Built to your exact requirements, WILLIAMS-WHITE presses represent the peak of up-to-date design and craftsmanship.

Your specifications as to capacity, plate size, number of openings, types of controls, etc., are built into each WILLIAMS-WHITE hot or cold press. They are available in column or A-frame construction, with steam, fluid or electrically heated plates.

Above is a typical WILLIAMS-WHITE laboratory press, of 90 tons capacity, plate size 38" x 24" and daylight opening 12 inches.

At right is a WILLIAMS-WHITE cold press of 575 tons capacity, with plate size 106" x 54" and adjustable daylight opening, 80 to 123 inches.



REPRESENTATIVES:

ALLIED NORTHWEST MACH. TOOL CORP.
Portland, Ore.

GEORGE A. DAVIES, JR., MACH. CO.
Los Angeles, Calif.

WILLIAMS-WHITE & CO.
Chicago Office, J. E. Maynard, Mgr.
53 W. Jackson Blvd.

BUILDERS OF MACHINERY SINCE 1854

WILLIAMS-WHITE & Co.

400 EIGHTH ST. • MOLINE, ILLINOIS

PRESSES • BULLDOZERS • BENDERS • PUNCHES • SHEARS

New Plywood Panel

Continued from Page 28

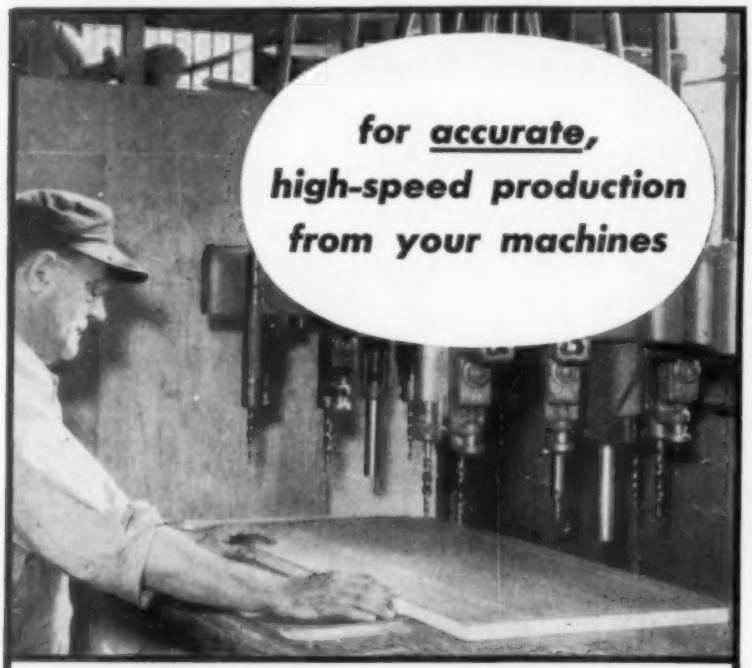
output in this field doubled last year, reaching better than 13 million ft. Both companies say this is only a begining.

Manufacture begins with a panel of exterior-type fir plywood with absolutely waterproof glue meeting the rigid performance requirements of the industry's joint quality control program administered by Douglas Fir Plywood Association.

The patching machine fills all defects with a plastic compound which is cured under infra-red reflected heat; then the panel is sanded and the plastic sheet is fused to the wood under heat and pressure.

Both firms shared development costs of the patching machine on which the pending patents are jointly held. It will be available under license to other plywood manufacturers in the near future.

Duraply is being marketed with both one or two-side plastic surfaces in 4 x 8 sheets 5/16 to 3/4 in. thick. In addition, U.S. Plywood will precut and package special wide-lapped siding with beveled drip edges, furring strips applied, and ventilation provided.



get GREENLEE high-quality boring tools

Produced by the makers of fine woodworking machines, GREENLEE boring tools are designed and built specifically to handle fast work . . . stand up under long, hard usage . . . bore clean. Each tool has accurate sizing, sharp cutting edges, proper heat-treating to bring you high-speed, highly accurate production. Line includes Machine Bits, Machine Drills, Dowel Bits and Drills, Countersink Bits and Drills, Multi-Spur Machine Bits, Expansive Bits, Plug Cutters, Relishing Bits, and others. To get the finest results from your machines "get GREENLEE." Write today for Catalog 34-M with complete data.

GREENLEE

GREENLEE TOOL CO., Division of Greenlee Bros. & Co., 2153 Herbert Ave., Rockford, Ill.

Boring Tools • Hollow Chisels and Bits • Hollow Chisel Sharpeners • And many others • Teco Grooving Tools for Timber Construction • GREENLEE Woodworking Machines include Tenoners • Saws • Mortisers • Borers • Planers • Shapers

SPECIAL REPORTS

Pressure-Treating Directory. Just published by the Western Wood Preserving Operators' Assn. is a directory containing complete information on the manufacturing facilities of 19 pressure-treating plants in western states. Copies are available upon request from the association, 1410 S.W. Morrison St., Portland 5, Ore.

Safety Manual. The National Safety Council has published a new and greatly expanded edition of its "Accident Prevention Manual for Industrial Operations." It is a 1341-page encyclopedia of safety which includes all information needed to organize a comprehensive safety program and to keep it going, and may be purchased for $13.50 from the Council at 425 N. Michigan Ave., Chicago 11, Ill.

Research Guide. The 1956 edition of the Forest Products Research Guide has been published by the National Lumber Mfrs. Assn., 1319 18th St., N.W., Washington 6, D.C. and is available for $15. The guide reports on research projects in the U.S.S.R., U.S., and more than 50 other major countries, for the benefit of laboratories, manufacturers, educators, students, and libraries.

Canadian Wood. An interesting booklet has been published by the Dept. of Trade and Commerce, Ottawa, Canada, called "Canadian Wood At Work." Well-illustrated, it names, from A through W, Canada's exported wooden products and the trees from which they are derived.

WOOD YOU BELIEVE IT?

The National Bureau of Standards reports that wood shingle roofs have a life expectancy 43% greater than asphalt shingles and under adverse climatic conditions wood shingles are most satisfactory, ahead of cement asbestos, slate built-up, tile, asphalt, metal and roll.

?

"The Persian rugs" of the roofing industry are hand-split Western red cedar shakes, known to last nearly 200 years.

?

There are said to be 1027 different tree species in the United States and Alaska.

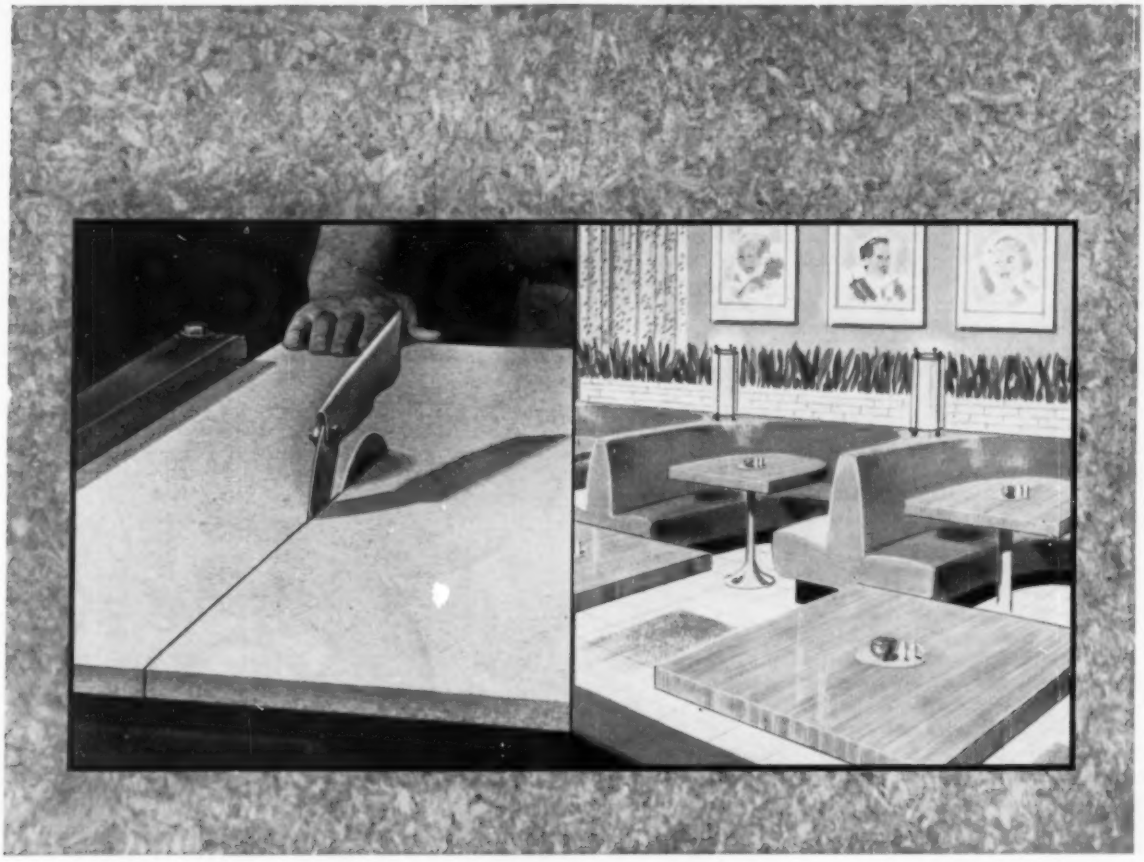
?

The first logging of Douglas fir on record was by Captain James Cook in 1778 for new masts for his ships, the Resolution and Discovery.

?

American farmers use about 500 million wooden fence posts a year.

AN IDEAL BASE FOR BETTER PRODUCTS



WEYERHAEUSER 4-SQUARE PARTICLE BOARD—
Can Mean Important Savings and a Better Product for You!

THIS NEW and better panel type core stock was designed and developed by Weyerhaeuser to meet specific needs in the manufacture of furniture, counter tops, sink and table tops, and cabinets. In many cases, 4-Square Particle Board will effect production and procurement economies, and contribute to a better finished product.

Product Engineers and Designers are finding many interesting possibilities for a wide variety of uses and applications for this fine core stock, which is available in densities for both 3 and 5 ply use. Production men are enthusiastic over its machining qualities. Grain, knots and slivers have been eliminated. Because of its flatness, sanded surfaces and stability—it is an ideal base for wood veneers, decorative laminated plastics.

Another important consideration is the constant supply and consistent pricing of Weyerhaeuser 4-Square Particle Board. You can space out shipments to meet recurring demands on a firm order basis at predetermined price levels, thus protecting both your supply and cost position.

Investigate its use in your product. Write today for complete information, specifications and sample. 4-Square Particle Board is available in 4′ x 8′ panels, or cut to order size, in thicknesses of 3/8″, 1/2″, 5/8″, 3/4″ and 1″.

Write for **SAMPLE**

Test it! You'll quickly see the possibilities of important savings and a better product for you.

Weyerhaeuser Sales Company

HARDBOARD DEPARTMENT

First National Bank Building • St. Paul 1, Minnesota

Safety Plan

Continued from Page 33

plant or equipment, and (2) Unsafe work methods or acts of workers. Or, stated differently, accidents are the result of either (1) faulty environment, or (2) the human element.

Dr. Harry Meyers once said, "When a machine stops, it is caused by one of six things: (1) dirt, (2) a worn or broken part, (3) a loose connection, (4) no power, (5) a poorly fitted part, or (6) no oil."

The same things that stop a machine will also stop a human being. Let's transpose these causes item for item from machine power to human power:

(1) **Dirt** probably interferes more with good operation of mechanical devices than any other thing. The same is true of a man—dirt, disorder and poor housekeeping will keep a man from working safely just as carbon under a valve will curtail the efficiency of an engine.

(2) **Broken or worn parts**—in the human element cause this falls under the heading of physical and mental characteristics . . . worn or broken parts—slow mental reaction, lack of coordination, lack of emotional stability, poor eyesight, muscular weakness, and many others.

(3) **Loose connections**—should be classified as knowledge and skill. Where does our safety program fail here? By our condoning faulty work habits, ignorance of correct methods, insufficient experience, poor supervision or poor cooperation.

(4) **No power**—a safety program should be designed to ascertain if a man is in bad health, if he is lazy, worried, or, probably if he is discouraged to the point that his outlook on life is dimmed to the verge of disgust.

(5) **Poorly fitting part** – what's the old saying . . . a square peg in a round hole . . . or in shop language, a misplaced man. Why are individuals misplaced in industry when there are so many sure ways to actually place him in the right spot?

(6) **No oil** – in a machine this means too hot, burned-out bearings or burned up. Do we in our safety program see that a man is kept supplied with oil that keeps him moving . . . that keeps him from burning up, a bad temper, malice, revenge, prejudice? These in themselves are destructive factors of life.

Why are all these a part of what's wrong with our safety programs? Because our failure to recognize that it is the human element that causes accidents is the greatest thing wrong with our safety programs today.

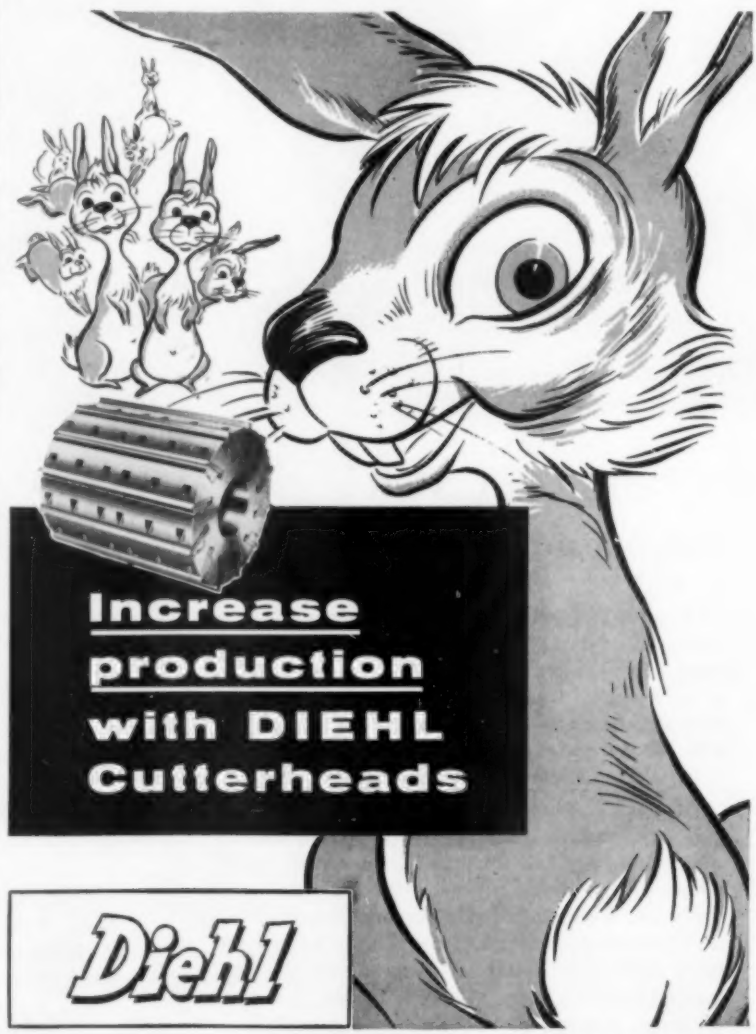
One more element attached to every individual should be considered—his attitude or behavior. Let's consider what makes a man have attitudes—especially bad ones. A man's attitude is not inherited. Rather, it develops right in your plant. He didn't have a bad attitude when he came to work for you. If he did, your employment department certainly did a poor job of selling and of placement.

His indifference is a result of example, training or plain poor supervision, and so on down through the line of inattention, indolence, arrogance, recklessness and hostility. Your safety program will be a failure if the study and guiding of people in attitudes is omitted.

What else was mentioned—environment. If this man is exposed by the safety program to hazardous plant arrangement, to unsafe materials and equipment, bad ventilation, unguarded moving machinery, poor illumination and unsafe processes, it's easy to determine why the safety program doesn't work.

You can do something about correcting what's wrong with your accident prevention program by observing the following:

(1) Do more accident prevention



THE G. M. DIEHL MACHINE WORKS, INC. • WABASH, INDIANA

work and fewer safety programs based on injuries.

(2) Study and correct all potential causes of injury.

(3) Make thorough careful inspections of your plant and do something about the faults found.

(4) Remember that every worker is an individual and must be treated as such.

(5) Be sure you know the facts if an accident does occur.

(6) Above all, plan your accident prevention work so as to call for and get cooperation from every worker in the plant.

Hiding Hardwood Defects

Continued from Page 30

etc. (The accompanying photographs compare this method of hiding defects with the "filling method.")

The selection of veneer from which to cut figures is a matter of personal preference. African mahogany does not give a sharp contrast on oak or maple, for example, but the effect is beautiful and distinctive. On the other hand, the contrast given by walnut on oak or maple is most striking. While a wood of the color and tone of African mahogany is the most versatile, nearly every combination of face veneer figures and hardwood lumber paneling has certain charms, and will have its admirers.

The figures can be cut from scrap veneer, glued in place, and finished by the consumer himself. However, for the idea to be fully exploited, appropriate figures should be factory-cut, prefinished on the face with a clear lacquer, precovered on the back with a thermal setting adhesive, packaged in sets containing about 18 figures (on the average wall made from paneling cut from No. 2 and 3C lumber, 18 figures will cover the defects on about 100 sq. ft.), and made readily available along with the paneling.

In each package instructions should tell how to lay out and apply the figures. Directions, highlighted by illustrations, might read: "With cellulose tape fasten the figures over the defects on your wall in the arrangement desired. When a suitable pattern has been attained, remove paper backing from figures, place in position and apply with hand pressure, and bond with household iron at medium temperature."

It might be desirable to use a bonding agent which would permit removal of the figures should the home owner desire to change the arrangement, or put up new figures at a later date.

The figures might catch on for application to plywood or clear lumber paneled walls, or to certain items of furniture such as beds, children's desks, or book cases.

Also they might serve as a maintenance item to cover damage to furniture or walls. Certainly such "side effects" should be encouraged in advertising and in the instructions.

New England

WILLIAM H. FIELD COMPANY
323-9 Dorchester Ave • Boston 27, Massachusetts • Phone: AN. 8-1111

Middle Atlantic

HERMANCE MACHINE COMPANY
First and Campbell Streets • Williamsport, Pennsylvania • Phone: 9157

W. E. RICKETTS & SONS COMPANY
Box 150 • Jamestown, New York • Phone: 4813

B. M. ROOT COMPANY
York, Pennsylvania • Phone: 5449

H. C. WHITLOCK CORPORATION
205 W. 34th Street • New York 1, N. Y. • Phone: LAckawanna: 4-4166-7

East North Central

CRITCHLOW WOODWORKING MACHINERY
400 Lakeside Drive N. W. • Cleveland 13, Ohio • Phone: MAin 1-4955

MR. VERNE DeCAMP
P. O. Box 328 • Warsaw, Indiana • Phone: 3016M

A. L. FADER & COMPANY
223 North DesPlaines Street • Chicago 6, Illinois • Phone: STate 2-7634

MR. EVAN KROLL
P. O. Box 79 • Peru, Indiana • Phone: 5067

MONICAL MACHINERY COMPANY
2020 Bristol Ave., N. W. • Grand Rapids 4, Michigan • Phone: GLendale 8-1433

JOHN O. SCHULTE & SON
1808 Bluefield Place, Roselawn • P. O. Box 2571 • Cincinnati 37, Ohio • 15369

HOLTSON MACHINERY COMPANY
46 Douglas Avenue at 1700 East First Street • Dayton, Ohio • LIncoln 1763

South Atlantic

BROOKS MACHINERY COMPANY
P. O. Box 256 Dupont Rd. • Martinsville, Va. • Phone: Day 3234; Night 3247

GARRISON MACHINERY COMPANY
Box 288 • Statesville, North Carolina • Phone: 6977 and 6150

PYE-BARKER SUPPLY COMPANY
231 Pryor Street, S. W. • Atlanta, Georgia • Phone: WAlnut 2252

NORMENT & LAMBERT, INCORPORATED
P. O. Box 599 • Lenoir, North Carolina • Phone: PLaza 4-9571
P. O. Box 2668 • Greensboro, N. C. • Phone: 2-5022

PALMER MACHINERY COMPANY
Talleyrand Ave. & Jessie St. • Box 87 • Jacksonville 1, Fla. • Phone: EL. 3-5747-48

East South Central

BURTON FRANKLIN COMPANY
1918 Dayton Boulevard • Chattanooga 5, Tennessee • Phone: 60615

MEMPHIS MACHINERY & SUPPLY COMPANY
205 So. Front St. • P. O. Box 225 • Memphis 1, Tenn. • Phone: JAckson 7-4443

West South Central

TROSCLAIR WOODWORKING MACHINERY
Box 8193, Gentilly Sta. • New Orleans 22, Louisiana • Phone: EVergreen 3894

TRI-STATE MACHINERY COMPANY
3000 Commerce Street • Dallas, Texas • Phone: PRospect 3235

Pacific

FRANK E. JONES MACHINERY CORPORATION
1405-05 Santa Fe Ave. • Los Angeles 21, Calif. • Phone: VAndyke 9132

PACIFIC WOODWORKING MACHINERY COMPANY
2929 Fifth Street • Berkeley 10, California • Phone: THornwall 5-2350

STAR MACHINERY COMPANY
241 Lander Street • Seattle 4, Washington • Phone: ELliot 0760
East 415 Sprague Ave. • Spokane, Washington • Phone: RIverside 6121
801 South West Front Street • Portland 4, Oregon • Phone: ATwater 7395

Export

ENGEL EQUIPMENT COMPANY
431 S. Dearborn Street • Chicago 5, Ill. • Phone: HArrison 7-3225 to 3226

TRI-STATE MACHINERY COMPANY
3000 Commerce Street • Dallas, Texas • Phone: PRospect 3835
(REPRESENTATIVE FOR REPUBLIC OF MEXICO)

"HOW ABOUT A DRAWER FOR REMOVING DEAD COWBOYS?"

Management Essentials
Continued from Page 22

lic, the company attracts not only the best personnel, but the progressive and most reliable customers. On the other hand, if the president is known for sharp practices, he usually surrounds himself with that type of employee and retains customers largely through inside deals, price cuts or the inability of the customer to buy elsewhere.

As a leader the president shares his responsibilities with his key personnel and associates. He guides decisions to conform with company policies always as a leader of a team rather than with the force of a dictator. He works with his department heads and helps solve the difficult problems, whether they be in sales, finance or factory. This type of leader is in contrast to the president who makes all of the decisions, belittles the efforts of his subordinates and is ready with criticisms for anyone who may suggest a new idea.

There is also the chief executive who has attained his position through being the oldest member on the staff or through inheritance from his father or a relative who may be a large stockholder. In many of these instances small regard is given to the qualifications that may be required to build an aggressive and prosperous company. It is extremely difficult for a son to follow in the footsteps of a successful father. Being the son of the president, he is rarely given fundamental training and the independent responsibility that will ultimately prepare him for the top position in the company.

The second ingredient for successful management is the sound selection and training of personnel. The success or failure of this most important element is largely dependent on the time and attention given to it by the senior executive group. Unless this group is keenly interested in the selection and development of the best personnel available, the level of skills declines, and the future of the company becomes hazardous.

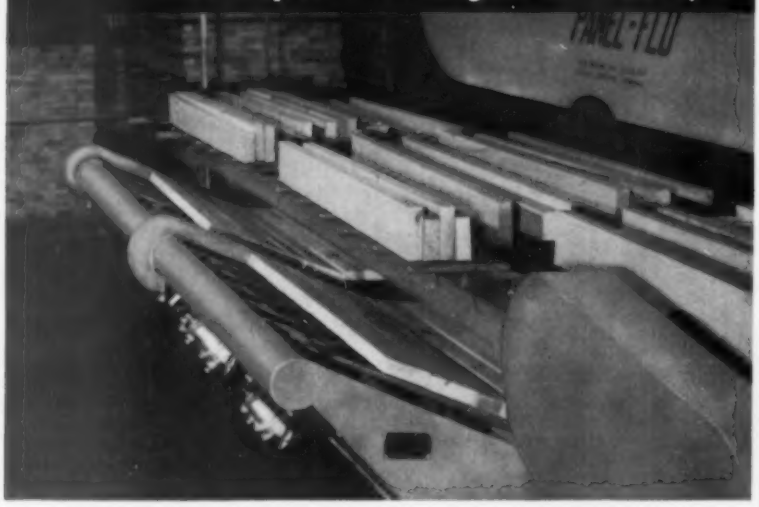
In the selection of personnel, many companies depend on industrial psychologists. This technique has been found useful in evaluating character, ability and the potential capacity of men. This technique is also used to develop men for higher positions of responsibility. Some companies depend entirely upon personal selection and promotion from the ranks.

Personnel is usually the responsibility of the Industrial Relations Department. This department is frequently neglected by management because it appears nonproductive and always seems involved with difficult and uncomfortable problems. But the employment of capable people and the retention of good employee relations certainly warrants the time and attention of a senior executive skilled in human relations. Failure to recognize the importance of this function frequently results in unfavorable and too-restrictive labor contracts being imposed on a company by labor unions. Unfortunately, in many instances, labor leaders who spend all of their time on labor matters are far better equipped to negotiate than the company executive who studies the problem only at contract time or when there is an important grievance.

The adequate training and development of employees is of great importance if the company is to progress and introduce new products and methods. The old system of hiring for the lower grades and hoping that through association alone the employee will acquire skill, is slow, doubtful, and expensive. A definite program of training and development is not difficult to set up and over a

The Basic-Witz Furniture Industries, Inc. Reports:

TAYLOR PANEL-FLO EDGE GLUES CORE STOCK AT 4,184 FEET PER HOUR — *with Rejects Totaling Less Than 1%!*



Three reasons account for Basic-Witz Furniture Industries, Inc. attaining this high production figure. *First* . . the use of 20-ft. steam-heated platens(instead of the standard 15-ft. length) permits faster feed with equal heat transfer for curing the glue. *Second* . . . the ease of operation, inherent in Taylor design, which makes for faster feeding with a minimum of operator fatigue. *Third* . . . Panels are sized automatically with indiscriminate feeding at the PANEL-FLO operator's station.

This is the performance story of the new 20-ft. PANEL-FLO Continuous Edge Gluing Machine, and sizing saw, in operation at the Staunton, Va. plant of Basic-Witz Furniture Industries, Inc. A new 15-ft. standard PANEL-FLO, and sizing saw, is giving comparable service at the company's Waynesboro, Va. plant.

Let us arrange to have you see the PANEL-FLO in operation. Your request will receive prompt attention.

FREE BOOKLET: Write today for your copy of "The Taylor Panel-Flo Continuous Edge Gluing Machine," a booklet which explains the engineering advancements accompanying this new, revolutionary method of Continuous Edge Gluing.

James L. Taylor Mfg. Co.

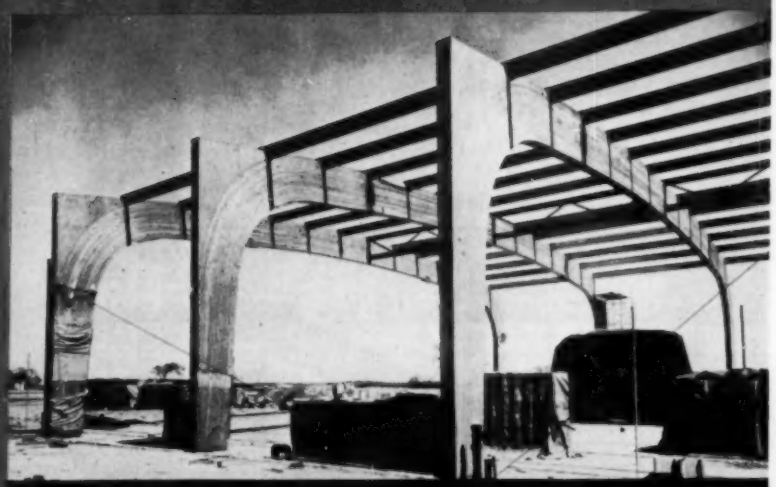
Edge Gluing Specialists Since 1900

116 PARKER AVE., POUGHKEEPSIE, N. Y.

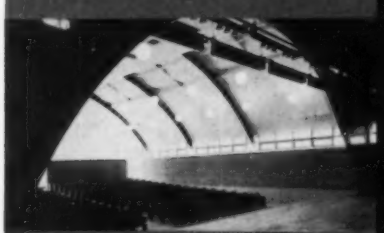
Construction Acclaims the Advantages of Wood Laminates Bonded with

CATALIN RESORCINOL ADHESIVES

EXTREMELY DURABLE . . . WATERPROOF



Faster Curing
Easier-to-Handle
Formulations



Above: Rilco Radial Arches at Laredo, Tex., High School Auditorium. Below: Rilco Beam Arches, Bennett, Colo., School Gymnasium.

One of the age-old problems faced by logging and sawmill operations has been to find trees tall and straight enough to be cut into units of a quality and size to meet construction requirements. Until the comparatively recent development of waterproof resorcinol adhesives, timbers larger than 24' x 12" x 6" were practically unobtainable.

Today, by the process of lamination and the use of CATALIN Resorcinol Adhesives, wood arches, beams and trusses up to and more than 100' wide are being successfully produced. In this field, the achievements of the Rilco Laminated Products, Inc., of St. Paul, have gained wide acclaim.

For school gymnasiums and auditoriums and in churches and other buildings requiring wide, unobstructed floor areas, the adoption of Rilco wood-laminated structural units has resulted in reduced cost, improved appearance and greater diversification of design.

CATALIN offers the woodworking industry a wide range of Resorcinol and Phenol Resorcinol resin formulations. Each in its particular category meets exacting production requirements and government specifications. Inquiries invited.

Catalin

CATALIN CORPORATION OF AMERICA
ONE PARK AVENUE, NEW YORK 16, N. Y.

PLANTS at FORDS, N. J.
CALUMET CITY, ILL.
THOMASVILLE, N.C.

BRANCH OFFICES: CHICAGO, ILL., 221 No. La Salle Street
GREENSBORO, N.C., 630 Southeastern Bldg.

period of time will pay large dividends.

Adequate communications between executives, supervisors and employees are essential in any well-managed company. Company policy, new products, processes, changes and company problems generally, are all matters of interest to everyone in the organization and if properly presented will receive enthusiastic support. It is far better to bring up these matters openly through meetings, brochures or a company newspaper than to have them the subject of garbled gossip.

The third ingredient for successful management is the ability to use management tools. There are many of these tools and, depending upon application, they are used generally by the leading companies in industry. Among the more important of these tools are:

Market Research — Periodic and constant market investigations to determine how the products are being sold, consumer acceptance, the effectiveness and use of advertising, new markets, new products, market trends and, in general, how the products stand in the trade. Commissions, discounts and salesmen's compensation should be included in these studies.

Budgets and Costs — Sales forecasts, costs and cost control are essential for proper pricing, selective selling and control of costs and profits. The supervisory group should participate in the preparation of these standards and then should be fully informed of their actual performance compared with the standard. When properly set these standards not only control costs, but measure the effectiveness of supervisors and executives in all phases of the business regardless of volume levels.

Quality Control — An organized quality control department is relatively new in most companies. Its importance grows as the company grows, and it becomes impossible for senior executives to give quality the time and attention it requires. We all recognize the importance of quality and should remember that workmen will produce only to the standards established by the company.

Inventory and Production Control — These are the planning functions that must be used if obsolete or excessive stocks and delays are to be avoided. The cost of materials, space and manpower is so great today that no well-managed company can afford to be without these functions.

Methods—Methods, materials handling, plant layout, new equipment and now automation are functions that must receive constant attention if costs are to remain competitive.

Standards and Incentives — All tasks should be interpreted in terms of a fair day's work whenever possible. The productive effort of workers, then, should be measured by comparison with this work standard. Incentive payments for meeting or exceeding these standards usually have the effect of improving employee morale and reducing costs.

There are many additional tools that should be added to this list. For illustration – research and development, product and equipment, engineering, office equipment and procedures, and all the other staff functions outside of the actual manufacture and sale of products.

Editor's Note.—*The foregoing article is adapted from an address made by Mr. Ackerman at the annual meeting in November 1955 of Southern Furniture Manufacturers' Association at White Sulphur Springs, Va.*

cut-to-size or prefabricated—
which will reduce your costs?

● Pre-cut wood parts by Weyerhaeuser can reduce waste, save labor and speed up production. In many cases, partially completed wood parts can increase profits even more.

You can easily find out which type of wood part will do the most to lower your costs and increase your net profits. Simply request a preliminary study by one of our engineers. There is no obligation—we welcome the opportunity to demonstrate how Weyerhaeuser Pre-Cut Wood Parts can serve you better. The parts are available in Ponderosa or Idaho White Pine and other Western softwoods.

Read how wood parts can cut costs
Send for your free copy of this valuable folder. It explains how many manufacturers are using Weyerhaeuser Wood Parts to reduce costs, increase profits.

WEYERHAEUSER SALES COMPANY
INDUSTRIAL WOOD PARTS DEPARTMENT
Room 2129-C, 400 West Madison Avenue, Chicago, Illinois

A WOOD Trading Post Ad will find Men—Materials—Machinery (See Page 80)

New Construction Heights

Continued from Page 34

enough for a playing field as well as 3500 spectators. At the center the roof has height equivalent to that of an 8-story building. In other words, it is large enough and high enough for the game to be played with the same freedom as out of doors.

Problems which heretofore prohibited the structural use of wood in this type of building were solved by unusual means.

Twelve wood arches of glued laminated Southern pine lumber constitute the sole structural support of the immense structure. They are the largest wood arches yet made. Each has a clear span of 247 ft., measures 340 ft. along the circumference; weighs over 15 tons and contains 17,000 bd. ft. of lumber. A wood roof deck 3½ in. thick is attached directly to the arches, and the continuity thus provided eliminates the need for purlims and other bracing. Only four rows of struts are needed in addition to the roof decking, thereby giving a clean, simple structure.

Advantages claimed for the new type of construction include: overall economy, simple and beautiful contemporary architecture, lower noise level because of the natural sound absorbing quality of wood, a high degree of fire resistance provided by the large glued laminated arches and struts and the heavy roof deck, great speed of erection, and a covered area where the rest of the work could proceed uninterrupted.

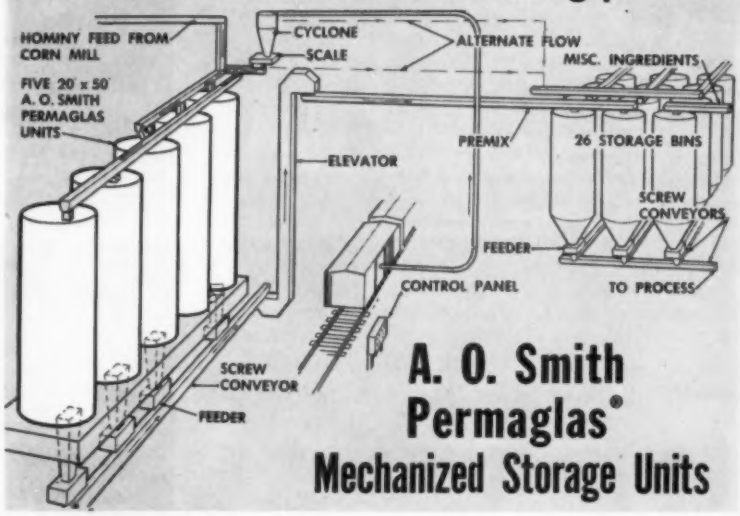
The design of the arches represents a distinct departure from customary procedure. Theoretically, there is no limit to the size of a glued laminated wooden arch, but problems of handling and shipping have curtailed their size.

In the case of the Jai Alai Fronton, the problems were solved by fabricating each arch in four sections, made possible by a special splice joint used at the quarter points of the arch. This splice was accomplished by using ½ in. thick steel plates 12 ft. long on the top of the arch and 6 ft. long on the bottom. These plates were joined to the arch by 100 shear plates at each splice.

The arches vary in depth from 26 in. at the base to 46 in. at the point of maximum stress to 22 in. at the crown. The base and crown connections were all three hinges. The pins and holes were accurately machined and filled in the shop to facilitate the field connection.

The arches were fabricated from nominal 2 x 12 in. Southern pine lum-

NEW solution to materials handling problems



A. O. Smith Permaglas® Mechanized Storage Units

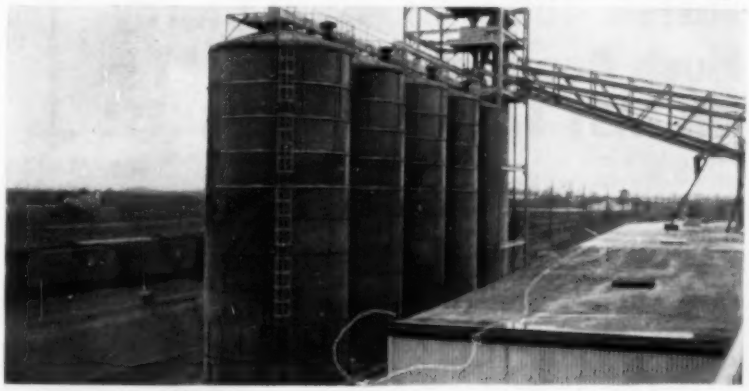
Here's the most efficient way to handle free-flowing materials at lower cost.

Glass-protected steel inside and out — five *Permaglas* Storage Units with mechanical bottom unloading are shown in the flow diagram above. They serve in a modern materials handling system used in the manufacture of Gaines Homogenized Dog Food — a product of General Foods Corp., Kankakee, Illinois.

Incoming raw materials are moved by vacuum from railroad cars to these units. Then A. O. Smith's exclusive mechanical sweep-arm bottom unloaders take over . . . remove materials — on a first-in, first-out basis — as they are needed for mixing. Handling and storage of individual bags or containers are eliminated. Accurate proportioning of ingredients assures consistent product quality.

Mail coupon for more information about A. O. Smith's *Permaglas* Mechanized Storage Units for more efficient bulk materials storage and handling.

New 6-page bulletin covers complete specifications of Permaglas Storage Units with mechanized bottom unloader.



Through research ...*a better way*

A.O.Smith
CORPORATION

HARVESTORE DIVISION
Kankakee, Illinois
Distributor: SPROUT-WALDRON
Muncy, Pennsylvania

A. O. SMITH CORPORATION
Harvestore Division • Kankakee, Illinois

Please send me complete facts about *Permaglas* Mechanized Storage Units.

Name .....

Address .....

City ..... State .....

ber in the Magnolia, Ark., plant of Unit Structures, Inc. In the manufacturing process, the 2 x 12s first were scarf jointed, then end glued. The longest lamina contained six scarf joints. After resurfacing, the lamina were run through a mechanical glue spreader and then assembled in a form engineered to conform with the shape of that particular section of the arch. The entire process of gluing and clamping was completed in 30 minutes for each arch section, and a uniform pressure of 150 p.s.i. was maintained on all glue lines.

When the clamps were removed, the arch section was taken to a finishing table where a planer traveling on an overhead crane surfaced the sides. Precision trimming followed, and the shear plates for the end connection were installed. Finally, two coats of clear sealer were applied. The sections were wrapped in tough water-proof paper, and loaded on rail cars by a truck-mounted crane, although the heaviest arch weighed over four tons. They were then shipped by rail over 1000 miles without damage in transit.

Splices and hinges were applied on the job site. Each half of the arch was attached to the base connection while lying on the ground. Two mobile cranes lifted these two halves rotating them about the base hinges until the crown hinge was in correct alignment. Insertion of the crown hinge pin completed the erection. As each arch was erected it was tied to the adjacent arch with four struts.

The new roof truss design is a venture by Diamond Lumber Co., Portland, Ore., into the "packaged building" field formerly served by metal buildings. The subsidiary is known as Plywood Structures, Inc., and the new design is expected to provide a practical, low-cost, permanent building for warehouses, commercial buildings, industrial plants, hangars, shop buildings, theatres, gymnasiums, farm buildings, grain storage, military buildings and many others.

The truss is delivered to the site with all lumber and plywood precision cut to detail and all steel and hardware fabricated to pattern. It is usually sold as a packaged building, f.o.b. cars. Site assembly before erection can be handled by carpenters and helpers. Erection is usually done with mobile cranes.

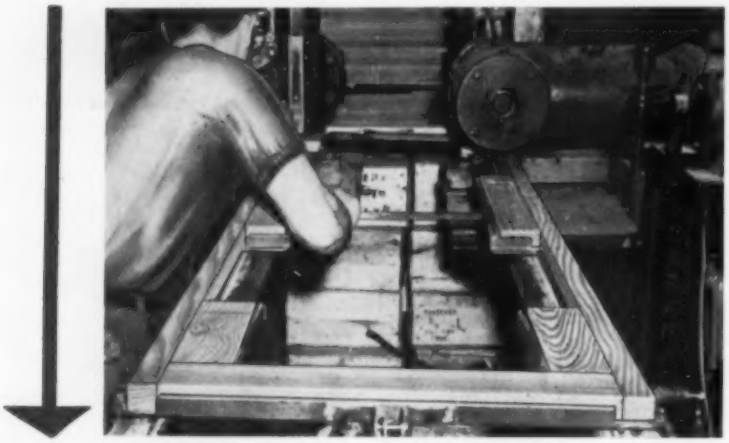
Not only does the system provide the economy by attaching the roof sheathing to the trusses before erection, but inasmuch as 13/16 in. exterior waterproof grade plywood is used in one continuous sheet from heel to heel to truss, doing the roofing as follows results in still further economies:

Joints are given one coat of mastic; followed by laying down a ribbon of fibre-glass, followed by another coat of mastic. The entire surface is then given one mopped-on coat of roofing compound, usually about 3 gal. to the square. Given the same attention and care usually given a so-called 15-year roof, this type of roof can be made to last indefinitely.

The advantages of the truss are seen in the small dimension material required and the continuous scarfed plywood upper chord, which functions both as truss upper chord and roof sheathing. At the same time the plywood roof decking provides diaphragmatic bracing for the entire building.

The lumber used comes from a good grade of structural value, but in short lengths and small sizes, obtainable at lowest cost. The continuous plywood members are scarfed and bonded under high temperature and pressure, using phenolic waterproof glue, both in the primary bond and in the scarf bond

Extending the use of plywood to the exterior walls provides further bracing through stressed-skin principle which when coupled with the plywood diaphragm on the roof gives the strongest possible construction at low cost.



Fasten 400—Or 4000 Sturdy Flush Door Frames PER DAY—ON FAST SARANAC MACHINES!

ABOVE—WITH ONE to three men, depending on production desired, two standard Saranac Corrugated Fastener Drivers costing less than $2,000 each can produce 400 to 1900 flush door frames per day. And at right, a crew on the Chain Feed Machine fastens up to 4000 frames in 8 hours!

THIS DEMONSTRATES two benefits—(A) the great productiveness of Saranac Machines and (B) that you can select the capacity *you* need from a wide range of Saranac sizes.

COSTS ARE BEING CUT on a variety of products with these fast, modern machines. Why not write today, describing *your* fastening operation?

We'll gladly send helpful literature and specific suggestions.

SARANAC MACHINE COMPANY
BENTON HARBOR • MICHIGAN

Manufacturers of the World's Largest Line of Fastening Machinery

78,000 feet of moulding per day— and every foot uniform in quality

That's profitable production . . . the kind Shaw Mfg. Co., Sumter, South Carolina, gets from this

Yates-American C-99 Moulder

TALK about a heavy-duty, high-production moulder — the C-99 is it!

For one thing, you get rapid changes in set-ups. At Shaw Mfg. Co., Sumter, S. C., for example, they run 160 feet of moulding per minute. And they use more than 75 different patterns, so changeovers are frequent.

Shaw moulder operators also like these other advantages of the C-99: The powerful feed-works. The upper rolls that adjust themselves to thick or thin lumber. The extra safety provided by the spindle brakes.

G. W. Shaw, president, writes, "There are so many good features about the C-99 moulder that we could hardly enumerate them all. All we have to say is the very highest praise."

See for yourself why woodworkers everywhere are so enthusiastic about the Yates-American C-99 Moulder. Ask the Yates-American man to show you one in actual operation. And mail the coupon for bulletin.

YA®

Yates-American

BELOIT, WISCONSIN

BRANCH OFFICES: CHICAGO, ILLINOIS; HIGH POINT, NORTH CAROLINA; MEMPHIS, TENNESSEE; PORTLAND, OREGON

First with the *Finest* in woodworking machinery

Established in 1883

MATCHERS • MOULDERS • SURFACERS • RIPSAWS • RESAWS • SANDERS

Tear out this coupon and mail today!

WW-S

YATES-AMERICAN
Dept. C, 803 N. Fourth Street, Beloit, Wisconsin

Send me free bulletin on the Yates-American C-99 Moulder.

Name _____

Company Name _____

Address _____

City _____ Zone _____ State _____

ALONG THE PRODUCTION LINE

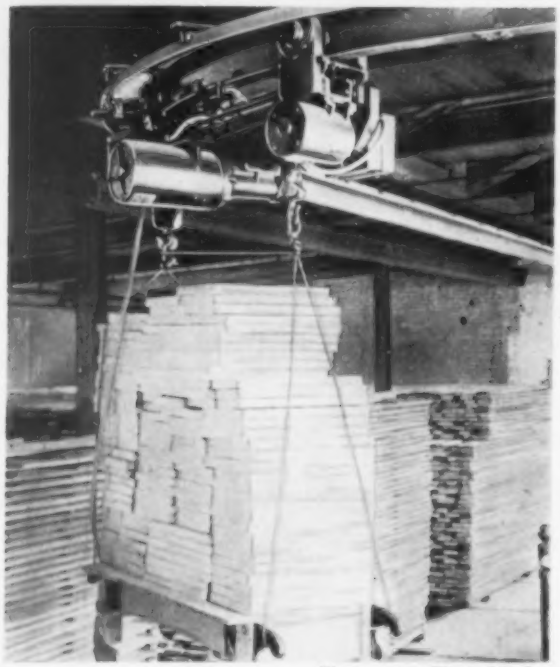


Photo courtesy Electro Lift, Inc.

TWIN-HOOK electric monorail hoist with motor-driven trolley and automatic control moves cut stock from salvage department to rough mill

Quick Truck Movement With Hoist and Overhead Trolley

When rough mill operations of a large coffin plant were conveyorized, space limitations required the salvage cut-up department to be located in one end of the tempering or equalizing area. Stock to be reworked at the salvage saws was delivered to the department via conveyor but were trucked back to the rough mill on factory trucks.

To eliminate manual handling of trucks to and from the salvage department, a few of these trucks were fitted with carrying handles at each end and a twin-hook electrically-operated hoist operating over a monorail with motor driven trolley and automatic control to carry cut stock to the rough mill and empty trucks back to the salvage department.

Voltage Check of Electrical Distribution

An Electrical Service engineer interviewed while making a voltage survey of a plant where excessive voltage drop was suspected, pointed out that voltage drop between no-load and full-load should never be more than 5% on motor circuits or 2½% on lighting circuits. He stated that light output falls off about three times as fast as the voltage, i.e. for every 10% drop in voltage about 30% is lost in output. Explaining the effect, a 500-watt lamp operated on a 10% undervoltage would give out only 300 watts of light.

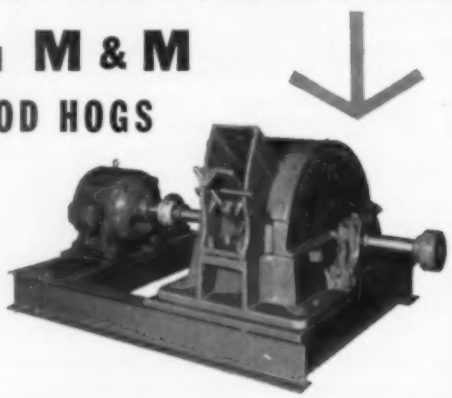
Before making the check, the engineer made certain that all circuits were loaded as heavily as possible so that any serious deficiencies would show up and true comparison would be afforded between full-load and no-load conditions.

Using a portable voltmeter, he began his checking with the service entrance or load side of the transformer, ex-

CONVERT WASTE INTO USABLE MATERIAL

WITH **M & M**

WOOD HOGS



When reduced in M & M Wood Hogs, timber and lumber scraps become profitable. M & M Sawmill Hogs reduce scrap such as slabs and edgings to a size usable as fuel chips. M & M Hogs grind miscellaneous blocks, shavings, and other scrap to wood chips excellent as livestock litter and other sawdust products. They also grind stumps for turpentine extraction and will reduce bark and plywood waste in the wet or dry state. Available in many sizes . . . write for catalog giving full information.

MITTS & MERRILL

93

1018 South Water Street • SAGINAW, MICHIGAN

Don't miss a single copy of "WOOD"

•

If your subscription is due to expire soon, send in your renewal order now!

A Daily Aid to Better Glue Room Operations

Handy 5½" x 8½" pocket size • durable cover • fully indexed • 100 pages • 150 problems • 46 drawings • 24 photos • 8 tables

Every man in your plant who has gluing responsibilities will want his own personal copy of this valuable reference book!

Price: $1.50 per copy postpaid

Quantity Discounts:

5-10 copies	10%	25-49 copies	20%
11-24 copies	15%	50 or more	25%

Don't delay! Order yours now!

Reprint of 14 articles from

WOOD & WOOD PRODUCTS

139 N. Clark St. • Chicago 2, Ill.

plaining that excessive drop at this point would indicate that transformers were overloaded or the utility might be faulty. Mains and feeders were checked at the branch feeder panels, and branches at lighting outlets and motor starters. The principal fault found was inadequacy of conductor size to deliver all power required at proper voltage due principally to addition of new machinery without compensating changes in the electrical distribution system.

Inside Drawer Finish

A MANUFACTURER of medium-priced furniture reports a good and economical drawer finish is provided by spraying drawer interiors with a single light coat of a 3-lb.-cut white or orange shellac (5 lbs. shellac cut with 3½ pints alcohol) or (4-lb. shellac cut with 1 quart alcohol) to the gallon. The shellac odor is eliminated by adding a little anise to the drawer coating solution which gives it a pleasing odor.

Bolts Used to Make Wooden Toys

A TOY MANUFACTURER using some 50,000 bd. ft. of hardwood each month to make wooden toys was influenced by a report of investigations made of the use of short-log bolters by the Forest Products Laboratories of Canada, to use short bolts instead of board-length hardwood lumber previously used. All logs are cut into 4-ft. bolts which are cut into boards at two short-log bolters. The boards are stacked and stuck into pallet packages 4-ft. square and are moved into a trackless dry kiln for drying with a fork lift truck, after the ends are coated.

This concern reports that better yield is obtained from conventional size logs and that bolting has permitted the use of farm logs which are lower in cost and are delivered to the mill. The bolters used in this operation are of the short log carriage type, consisting of a table saw, a carriage travelling on ways, and a folding type rip fence for quick

WALLY WALNUT Says:

"Here's Why MIDWEST Offers You your BEST BUY in WALNUT"

- You buy a **specialized product.** We select, cut, and sell only Walnut lumber — not a dozen different woods.
- You buy a **quality product.** We supply you choice, usable steamed Walnut lumber, the best to be had.
- You buy a **specific product.** Steamed Walnut lumber, dimension, and squares—the products of our sawmill and dry kilns—are our specialty. Air dried stock is available for immediate shipment.
- You buy an **economical product.** Our prices are competitive. What's more, our varied locations usually mean delivery at lower freight rates.

Write TODAY for Detailed Prices or Other Information!

MIDWEST WALNUT CO.

COUNCIL BLUFFS, IOWA

WARTRACE, TENN. WILLOW SPRINGS, MO.

problem:

Provide secure fasteners for six removable metal rods in wood cube

solution:

SIX SOUTHCO ANCHOR NUTS

Six 7/16" holes are drilled at proper angles, in cherry block. A Southco 1/4-20 Anchor Nut is inserted in each hole and expanded to form a rigid, permanent female thread in metal. Threaded end of rods are screwed into place by customer.

benefits:

1) Assembly costs minimized
2) Size and cost of packing case reduced
3) Lower shipping costs
4) Less storage space
5) Quick and easy assembly by customer
6) Strong and rigid tripod

©1954

SOUTHCO DIVISION

SOUTH CHESTER CORPORATION

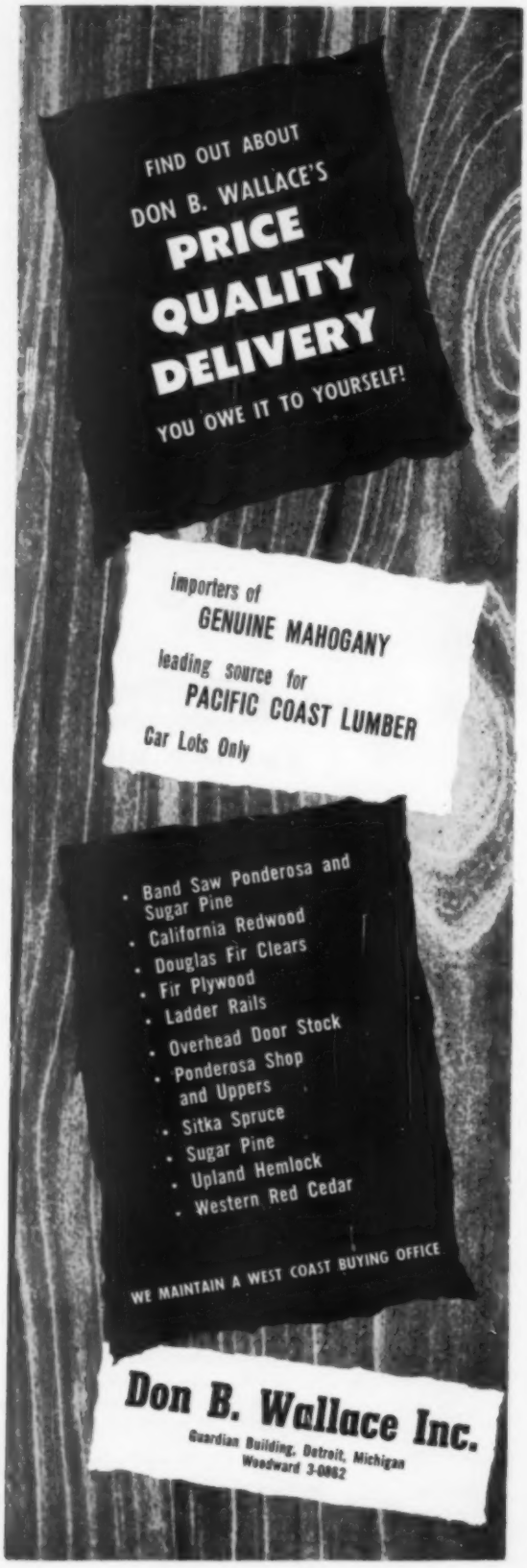
250 Industrial Highway, Lester, Pa.

Please send me complete catalog information on Southco Anchor Nuts

NAME_____

COMPANY_____

ADDRESS_____



setting. A top saw is available for sawing large diameter bolts as are carriage dogs.

Store Fixture Plywood

A STORE FIXTURE concern reports purchasing all plywood in multiple lengths and widths, measuring with the grain for stock lengths and across the grain for widths. This practice is said to permit all stock sizes to be combined to cut to good advantage. Decorative faced plywood is usually purchased in G1S grades but general utility plywood is ordered in G1S and G2S grades. The latter is purchased in standard lengths of 30, 36, 50, 54, 60 and 72 in. and standard widths of 24, 32, 36, 48, 60 and 72 in.

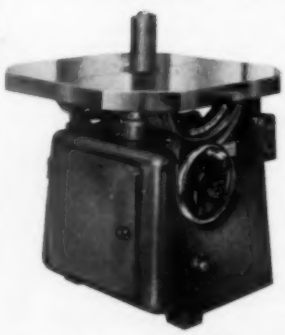
General plywood stock of 3-ply is carried in ¼- and ⅜-in. thickness; of 5-ply in 13/16-, ⅝- and 3/16-in. thickness. Douglas fir plywood is stocked as base material for decorative laminates for use as counter tops, work surfaces, table tops, etc. The 3-ply stock in ¼-in. thickness is used for panel constructions, such as counter ends. G1S grades in ⅝-in. thickness are generally used for shelving. Most of the 13/16-in. thickness stock is used for exposed bottoms of show cases and wall cases.

G2S grades of 5-ply stock are used where both sides are exposed, as in booth and pedestal ends and display stands. It is used in ⅝-in. thickness in making door and gate panels for partitions and case ends. In G1S grades 5-ply stock in ⅜-in. and 13/16-in. thickness is used for exposed tops of tables, counters and cases, backs of booth benches and where flush wainscot paneling is required.

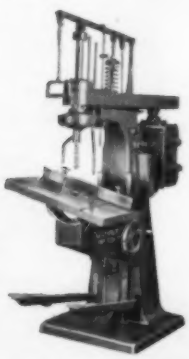
Laminates used include simulated wood veneer, woven or inlaid veneer faces, textured and textile designs and three-dimensional effects. Choice cabinet wood veneers used include mahogany, walnut, rosewood, comb grain and rift oak, zebrawood, avodire, narra, prima vera, korina, ayous and native hardwoods selected for figure and grain.

New Oliver machines fill unusual production needs

Oscillating-Tilting Spindle Sander



Quickly sands all edges of scroll work. Its 1-inch spindle rotates at 1800 r.p.m., oscillates 1¼" with 56 strokes a minute. Spindle tilts up to 45° toward, 5° away from operator, and has 3" vertical adjustment. Takes drums 2", 4", 6" diameter, 9" long. Write for Bulletin No. 381.



Bore 3-in. holes 12" deep

SINGLE AND DOUBLE SPINDLE

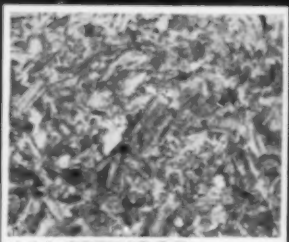
Has two ball bearing spindles — 10" between centers. Large table tilts 30° to and from column on graduated rockers.

Single Spindle Borer has table 18"x30"—tilts 40° to and from column, 15° right or left. Bores holes in center of 36-inch circle. Smooth V-belt drive. Write for Bulletins.

OLIVER MACHINERY COMPANY

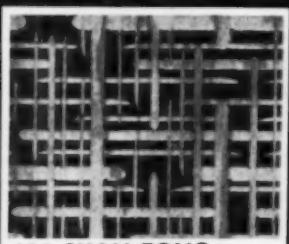
Established 1890 GRAND RAPIDS 2, MICH.

One Call for all . . .



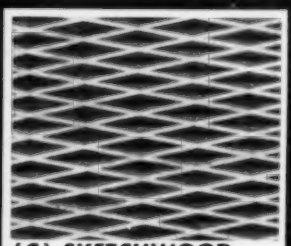
(A) REZWOOD

A sensational new quality chipboard manufactured by an entirely different process. REZWOOD is supplied in natural and finished surfaces and in desired tint tones. Ideal for furniture manufacturing, floor underlayment, interior walls, ceilings and for core stock. Competitive to plywood.



(B) SHAN-TONG

Made of fir plywood, SHAN-TONG is imprinted under heat and pressure and offers unlimited decorating and textured effects under any type of finish. The pattern adds an expensive 3 dimensional effect to inexpensive plywood. SHAN-TONG is economical and fast moving.



(C) SKETCHWOOD

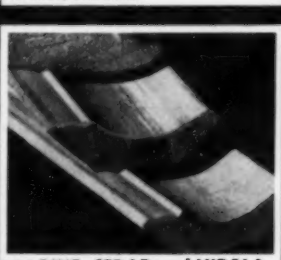
An outstanding specialty surfaced plywood. The 3 dimensional embossed surface adds richness to any room. A great demand for this product has been developed for specialty furniture construction and interior wall paneling. Beautiful, hard surfaced, economical.

(D) BIRCH PLYWOOD

At present the most popular of all specialty plywood products. Its wide use encompasses both new construction and remodeling. Used in cabinets and wall paneling. Birch panels come in varied thickness and with chipboard or conventional cores.

(E) LAUAN PLYWOOD

Rich, warm, mahogany toned plywood. The high quality imported LAUAN plywood is highly water resistant, rotary cut with one side sanded and good. 100% hot press glued. ¼" thickness. Light weight and strong.

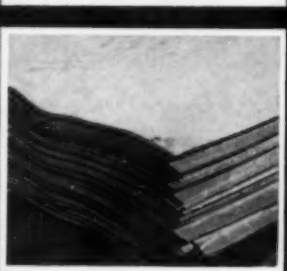


(F) PINE, CEDAR and VIROLA

(MAMBO-MOLD) Moulding. Shown are just a few patterns of the pine, cedar and virola moulding we have available. All sanded satin smooth and can be finished natural or painted. Top quality mouldings with the most modern patterns.

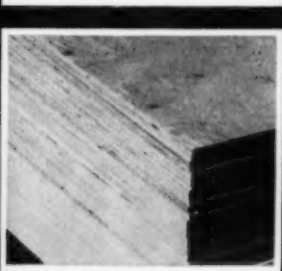
(G) FIR PLYWOOD

(SANDED INTERIOR)
Used inside, the several grades of interior plywood contribute to modern, efficient building practice and more comfortable, more livable homes. Structural superiority in floors, walls and roofs. Saves construction time and material.



(H) VENEER

Finish and core stock veneer bundled and ready for shipment. Fir and Hemlock, all grades. Quality manufactured.



(I) SHEATHING

Fir plywood unsanded wall sheathing. Provides more than twice the relative strength of other common sheathing materials. Saving in application time of more than 25%. Varied thicknesses available.

Phone
OSborn 9-8781
TWX RS-54-U
DILLARD, OREGON

DILLARD, ORE.

FAST, DEPENDABLE SERVICE

•

GUARANTEED QUALITY

•

MIXED CAR SHIPMENTS

•

REZWOOD CHIPBOARD

DOUGLAS FIR

PINE • STUDS

DIMENSION

PLYWOOD SERVICE, INC. Dept. B
BOX 78, DILLARD, OREGON RUSH ☐

GENTLEMEN:
Please send me more information on these products.

(A)____ (B)____ (C)____ (D)____ (E)____

(F)____ (G)____ (H)____ (I)____

NAME_____

POSITION_____

FIRM_____

ADDRESS_____

NAMES and EVENTS

INDUSTRY NEWS

1956 FPRS Meeting. The Municipal Auditorium of Asheville, N.C., will house the 10th annual meeting of Forest Products Research Society, June 4-7. Host for this meeting is the Carolinas-Chesapeake section of FPRS, and local activities will be guided by General Chairman E. S. Harrar, Duke University, Durham, while President-Elect Ralph H. Bescher, Koppers Co., Pittsburgh, will direct the technical program.

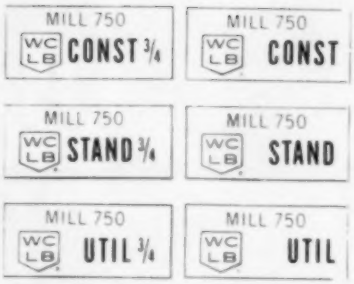
Sessions will be held on quality control, wood preservation, veneers and plywood (June 4), and wood drying, composition board, wood finishing, packaging, glues and gluing, marketing (June 5). Outside field trips and various entertainments are also being planned. In conjunction with the meetings, there will be "table top" exhibits by manufacturers, suppliers, and others interested in wood products.

Pallet Meeting. Representatives of 22 states met in Daytona Beach, Fla., recently for the 9th semi-annual meeting of National Wooden Pallet Mfrs. Assn. Along with election of officers, members voted upon an expanded trade promotion program of brochures and research, and heard reports on grading and inspection rules progress and the excellent prospects for the future of the industry.

New 1956 officers are: President W. R. Jordan, Pine Bluff, Ark.; Vice-President Walter G. Moeling III, Goodwater, Ala.; Vice-President Ellis C. Goodwin, Mine Run, Va.; Treasurer Frank H. Woodward, Brattleboro, Vt.; and Secretary-Manager W. H. Sardo, Jr., Washington, D.C.

The board of directors includes the officers and Welles Worthen, New York; Carl P. Rebele, Sandy Lake, Pa.; M. R. Piland, Jr., Williamsburg, Va.; Thomas N. DePew, St. Louis, Mo.; Charles L. Larson, Santa Clara, Calif.; J. L. Yankie, Harriman, Tenn.; Lee S. Settel, Ellijay, Ga.; and C. A. Dorr, Portland, Ore.

Cabinet Mfrs. Meeting. At its first full membership meeting recently of the newly formed National Institute of Wood Kitchen Cabinets, in Chicago, members set up a number of committees, including a sub-committee, directed by M. R. Liebenthal, Superior Cabinet & Mfg. Co., Detroit, to concentrate on the problems of kitchen built-ins. These committees are: Statistical and Survey headed by E. H. Courtenay, The Mengel Co., Louisville, Ky.; Research and Education headed by Hugh Gregg, Gregg & Son, Inc., Nashua, N. H.; and Promotion headed by C. R. Hunsicker, Curtis Cos., Inc., Clinton, Ia. The next meeting will be held in New England in October.



Use of the new West Coast grade stamps will begin March 15, according to West Coast Lumbermen's Assn. Shown at left are stamps for board grades, Construction, Standard, and Utility (formerly Nos. 1, 2 and 3). At right are dimension and timber grade stamps, Construction, Standard, and Utility (formerly Nos. 1, 2, and 3).

NAFM Convention & Fair. "Changing With the Times"—To Lower Costs, Develop Greater Profit, Increase Sales—is the theme of the coming 28th Convention and Supply, Equipment, and Fabric Fair of the National Association of Furniture Manufacturers, Aug. 26-30.

Displays at the Fair and Convention business sessions will feature new ma-

OUR SERVICE
OUR QUALITY

EQUALED BY FEW
EXCELLED BY NONE

Exclusively

HARDWOODS

APPALACHIAN SOUTHERN

Circular Sawn and Band Sawn • Can Surface - Resaw and Mill • Air Dried or Kiln Dried

Specialties: POPLAR CORE STOCK — DIMENSION STOCK — BOX AND CRATING LUMBER

THIS EMBLEM
SH
ASSURES QUALITY

SOUTHERN HARDWOOD CO.

MAIN OFFICE: P.O. Box 3333, Augusta, Ga. Tel. 6-1414
CHICAGO: 4753 Broadway, Chicago, Ill. Tel. LOngbeach 1-2980
PURCHASING SUPERVISOR: W. P. Campbell, Montgomery, Ala. 2-1833

chinery, materials, production methods, cost-saving techniques, sales and promotion ideas, and management methods. Over 250 technical experts, according to Executive Vice-President John M. Snow, will be on hand to discuss vital problems and provide latest technical solutions.

Southern Pine Convention. The 41st annual convention of Southern Pine Assn. will be held at the Roosevelt Hotel, New Orleans, April 4-6. President Arthur Temple, Jr., will preside over the business sessions, which will concentrate on more efficient production and more aggressive merchandising.

Concurrently with this meeting will be an industry-wide session of Southern Pine manufacturers, sponsored by the Industry Committee, to deal with the problems imposed by the increased minimum wage.

New Kroehler Plant. Construction has begun on a new lumber processing plant in Meridian, Miss., for Kroehler Mfg. Co., Naperville, Ill. The plant, scheduled for completion in 1957, will process gum wood for sofa and chair frames, and poplar for bedroom furniture, at about 100,000 bd. ft. per day.

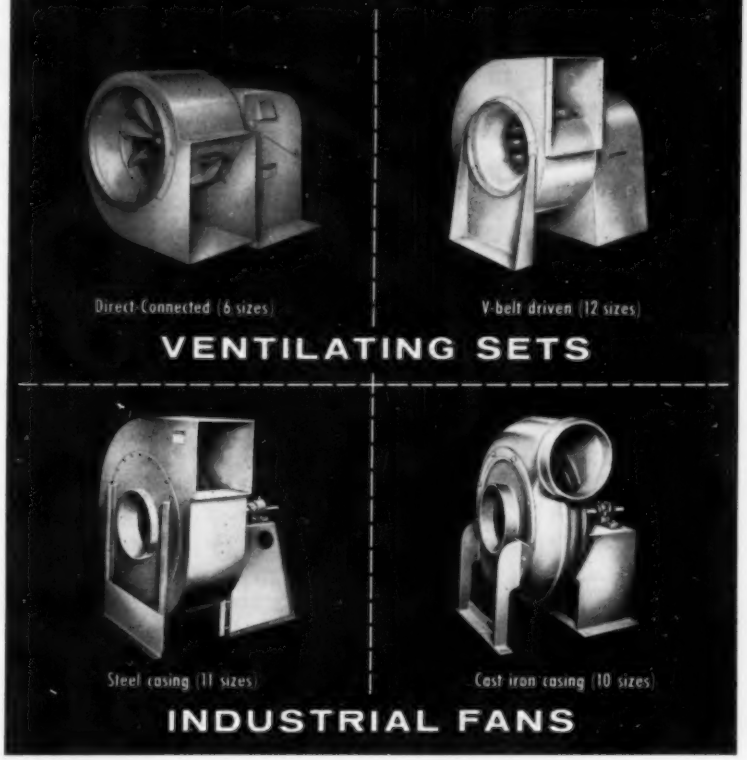
Kiln-Drying Course. Practical application of research findings will be the keynote of the 80th kiln-drying demonstration, Apr. 16-27, given by the U. S. Forest Products Laboratory, Madison, Wis. Included in the two-week course will be basic principles of air and kiln drying, discussions of individual seasoning problems, and special problems such as machining, gluing, and preservation.

Northwest Hardwood Meeting. At its second annual meeting recently in Portland, Ore., members of the Northwest Hardwood Assn. gave special consideration to suggestions on how to make marketable commodities out of the area's plentiful native hardwoods such as alder, madrone, maple, black oak, and tanoak. The group also reviewed committee recommendations on grading rules for such logs and lumber.

WOOD Award entries must be submitted to the executive secretary of Forest Products Research Society, Madison, Wis., by April 15. And on May 15, final papers are due for judging by the committee, which will then name the two winners of $350 cash and certificate and $150 cash and certificate. These awards will be presented by WOOD AND WOOD PRODUCTS at the annual FPRS meeting in Asheville, N.C., June 4-7.

Indiana Lumbermen Meet. A highlight of the 58th annual meeting of the Indiana Hardwood Lumbermen's Assn. in Indianapolis recently was the adoption of a forest policy urging careful

Readily Available Westinghouse Fans will help you increase production... employee efficiency!



Whatever your air handling problem . . . smoke, fumes, vapor, dust, wood shavings, granular material or ventilating . . . these Westinghouse fans are designed to handle or remove them . . . efficiently and economically.

Industrial Fans (Steel Casing) . . . High efficiency for general Air Handling; fume and dust removal; 11 sizes, each with 3 types of wheel for specific applications.

Industrial Fans (Cast Iron Casing) . . . Ruggedly built, corrosion resisting. For low volume fume or dust removal, materials conveying, industrial drying and cooling. In 10 sizes, each with 3 types of wheel for specific applications.

Ventilating Sets (Direct-Connected) . . . Compact, efficient, ready-to-run. Especially suited for small ventilating installations. Cleanable radial blade wheel minimizes problem of handling airborne dirt and grease.

Ventilating Sets (V-belt driven) . . . Self-contained. Install indoors or outdoors in a wide variety of heating, ventilating or air conditioning applications.

For complete application service, call your Industrial Distributor or your nearest Sturtevant Division Sales Engineer . . . or write Westinghouse Electric Corporation, Sturtevant Division, Dept. 8C, Hyde Park, Boston 36, Mass.

WESTINGHOUSE AIR HANDLING

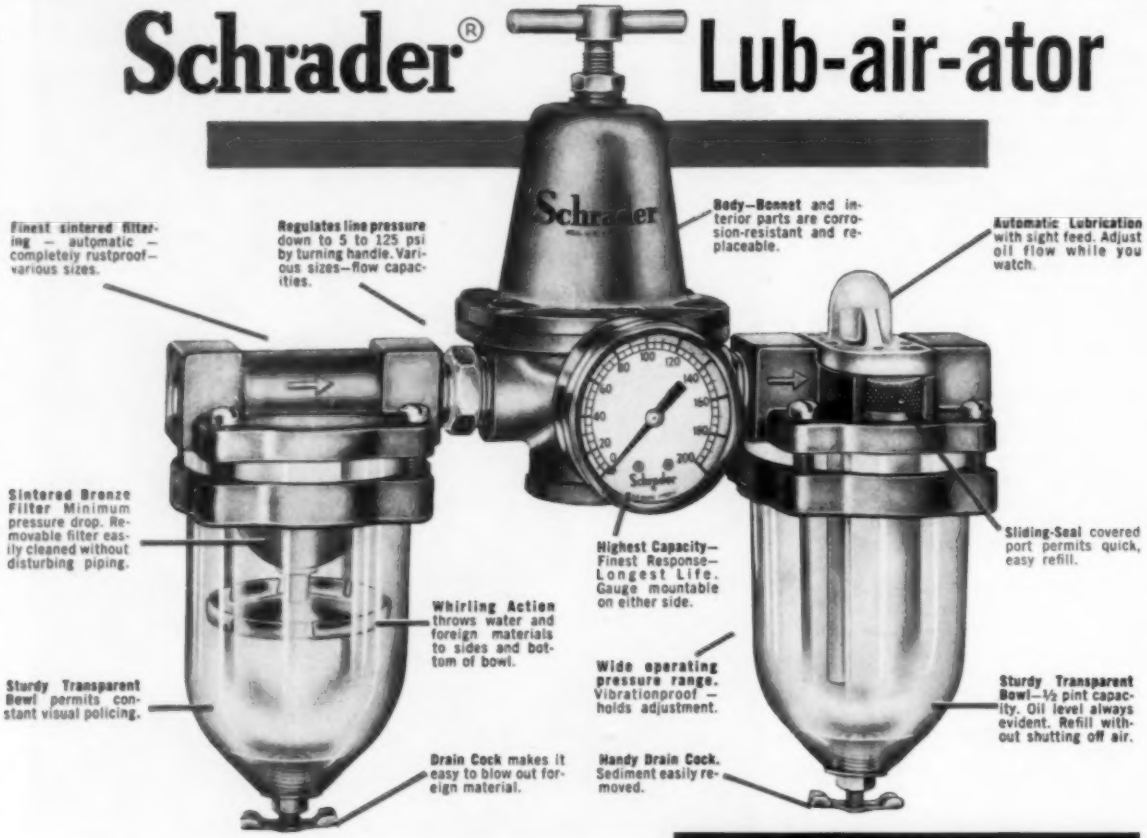
YOU CAN BE SURE... IF IT'S Westinghouse

J-80588

NEW!

FILTER...REGULATE...LUBRICATE with this

Schrader® Lub-air-ator


Finest sintered filtering — automatic — completely rustproof — various sizes.
Regulates line pressure down to 5 to 125 psi by turning handle. Various sizes—flow capacities.
Body—Bonnet and interior parts are corrosion-resistant and replaceable.
Automatic Lubrication with sight feed. Adjust oil flow while you watch.
Sintered Bronze Filter Minimum pressure drop. Removable filter easily cleaned without disturbing piping.
Highest Capacity—Finest Response—Longest Life. Gauge mountable on either side.
Sliding-Seal covered port permits quick, easy refill.
Whirling Action throws water and foreign materials to sides and bottom of bowl.
Wide operating pressure range. Vibrationproof — holds adjustment.
Sturdy Transparent Bowl permits constant visual policing.
Sturdy Transparent Bowl—½ pint capacity. Oil level always evident. Refill without shutting off air.
Drain Cock makes it easy to blow out foreign material.
Handy Drain Cock. Sediment easily removed.

Easily maintained. No moving parts—can be serviced without disturbing pipe connections.

Now! An all-in-one installation! The Schrader LUB-AIR-ATOR. This new, quality unit is designed to do these three important jobs: *filter* clean the air as it moves through system—*regulate* air to proper pressure requirements—*lubricate* moving parts in the correct amount to minimize wear and friction. End result: your valuable air tools give longer trouble-free service.

Use a Schrader LUB-AIR-ATOR wherever you need dependable, safe air service. And... if you design products with air equipment and controls—"build in" the Schrader LUB-AIR-ATOR. Its quality complements *your* equipment. For a fully illustrated specification sheet write us! Act now! Address A. SCHRADER'S SON, Division of Scovill Manufacturing Company, Incorporated, 468 Vanderbilt Avenue, Brooklyn, New York.

Schrader
REG. U. S. PAT. OFF.

LEADERS IN AIR CONTROL SINCE 1844

utilization and conservation of Indiana's forest resources.

Indiana's Lt. Governor Harold Handley discussed "Industrial Opportunities in Indiana," and other speakers were C. U. Gramelspacher, president of Jasper Wood Products Co.; T. M. Millett, Millett Hardwood Co., Louisville, Ky.; E. J. Lott, extension forester of Purdue University; and Ben Rhodes, representative of American Forest Products Industries.

Fixture Producers Meet. The first convention of the National Association of Store Fixture Manufacturers, recently organized, will occur at the Palmer House, Chicago, on March 22-23. Plans are being guided from the executive offices in Chicago, by Robert L. Strauss, executive secretary. At the meeting there will be round table and panel discussions of industry problems, election of directors, and approval of constitution and by-laws.

Westervelt Fellowship. Applications will be accepted up until April 1 for the H. E. Westervelt Forestry Fellowship at Alabama Polytechnic Institute's School of Agriculture Forestry Department. The fellowship of $2000 is available each year to one or more qualified applicants who seek a master's degree in forestry, and is granted for one year effective Sept. 1. Gulf States Paper Corp., Tuscaloosa, Ala., is the sponsor.

Training Course. College students majoring in wood technology or utilization will again have an opportunity to compete for four special scholarships carrying a cash award of $500 and 10 weeks' training in wood products research at the Washington, D. C., laboratory of Timber Engineering Co., June 25-Aug. 31. The contest, sponsored by NLMA, is open to one senior or graduate student from every college and university offering a course in wood technology or utilization. Such nomination should be made by the students' dean or department head by March 15, and winners will be announced April 15.

NOTES ABOUT SUPPLIERS

Moisture Register Co., Alhambra, Calif., has appointed representatives on the East and West coasts to handle its increased market activity. Covering the middle Atlantic area is Energy Controls Co., Inc. with main offices in New York, under President J. T. Vollbrecht, and Philadelphia, under Robert Trenner. Other offices are located in Albany, Wilmington, and Baltimore. The western representative is E. S. Browning Co., Inc., Los Angeles, under James G. Markel, and San Francisco, under R. N. Nason.

New Canadian Plant. Mathews Conveyor Co., Ellwood City, Pa., is beginning construction on new plant and office facilities for its Canadian subsidiary, Mathews Conveyor Co., Ltd., in Port Hope, Ontario. Mathews recently completed a sizeable expansion of its Ellwood City offices and factory.

A. G. Battaglia

Joseph Coufal

Paul McCormack

Jules Siorta

National Adhesives, New York, has formed a Structural Adhesives Department to specialize in its new series of thermosetting adhesives for similar and dissimilar surfaces. Heading the new group is A. G. Battaglia, whose assistant is Joseph Coufal as sales supervisor. Paul McCormack

Weldwood®
CONTACT CEMENT

Now! Reduce costs when applying Micarta and other laminates. Revolutionary Weldwood Contact Cement obsoletes clamps or presses. Bonds instantly on contact. No processing! No special tools or skills! Bonds any combination of wood, metal, fabric, paper, leather, felt, glass.

Weldwood
Plastic Resin GLUE

The "old reliable" glue for the master craftsman. Highly water-resistant. Makes glued joints actually stronger than the wood itself! Glued joints strengthen with age—no delayed failures to haunt your reputation—no creeping due to moisture or heat. It's stain-proof . . . rot-proof . . . bacteria-proof too!

Our warehouses, and mill supply and industrial distributors, coast to coast, stock Weldwood Products. Sizes: Weldwood Contact Cement—1 and 5 gal.; Weldwood Plastic Resin Glue—10 and 25 lb. cans, 100 and 300 lb. drums; Weldwood Presto-Set Glue—1 gal. jars and 5, 10, 30 and 55 gal. drums.

Weldwood
PRESTO-SET* GLUE

The first white, liquid glue worthy of the Weldwood name! Ready to use . . . sets fast . . . bonds like magic! Needs no mixing, dilution, heat or processing; no special containers or applicators. You can machine soft woods 20 to 30 minutes after gluing. *Freeze-and-thaw-proof.*

*Trademark

UNITED STATES PLYWOOD CORPORATION
55 W. 44th St., New York 36, N.Y.
Please send me information on:
☐ Weldwood Contact Cement
☐ Weldwood Plastic Resin Glue
☐ Weldwood Presto-Set Glue
WP-3-6-1A
NAME
ADDRESS
CITY STATE

handles field development of the new products, and Jules Sirota is in charge of laboratory development and formulating work.

Clark Equipment Co., Battle Creek, Mich., has opened its new Materials Handling Development Center to develop materials handling methods for individual industries. Glen R. Johnson, a former sales manager, has been appointed director. Since materials handling has become so complex and expensive, the company decided that separate analyses and solutions must be discovered for individual industries such as steel, textile, food, construction, and others.

PERSONNEL CHANGES

Dr. Von Fischer

Dr. William von Fischer has joined Glidden Co., Cleveland, as coordinator of research and development. An outstanding authority in chemistry, he is an editor and writer for several technical publications in the coatings field, and for the past eight years was head of the department of chemistry and chemical engineering at Case Institute of Technology in Cleveland.

August T. Murray, Oliver P. Quist, and **William J. Reid** have been appointed coated abrasives sales managers for Carborundum Co., Niagara Falls, N.Y. Mr. Murray has charge of the Central District of Buffalo and Pittsburgh areas, Mr. Quist is at the West Springfield, Mass., headquarters for the Eastern District of New England and New York, and Mr. Reid heads the Midwestern District at Chicago.

L. W. Jander

W. H. Gebhart

Louis W. Jander has been named general sales manager of the Henry Disston Div., H. K. Porter Co., Inc., Philadelphia. He succeeds **Walter H. Gebhart** who is now a consultant on sales policies and trade relations to Lawrence L. Garber, the Division's vice-president and general manager.

M. J. Drackett has been appointed sales manager of the attachments section of Clark Equipment Co.'s Industrial Truck Division according to an announcement by L. A. DePolis, general sales manager.

E. W. Prendergast, formerly branch manager at Atlanta, has been appointed by The Foxboro Co., Foxboro, Mass., regional manager of the Southeast territory. Other sales changes are: **R. F. Sutton** from Pittsburgh to Pensacola, as industrial engineer, **H. C. Craig** from Gray, Me., to Jacksonville Fla., as branch manager, and industrial engineers **F. J. Stevens, Jr.**, to Lakeland, Fla., and **L. C. Estes** to Atlanta.

Also **G. W. Reed, Jr.**, has been named manager at New Orleans, **J. K. Younkins**, manager at Charleston, W. Va., and industrial engineers **W. H. Rhyne, T. A. Jones** and **M. N. Walker** were assigned to Chattanooga, Charlotte, and Knoxville, respectively.

N. Ernest Gresham, who joined Gerlinger Carrier Co., Dallas, Ore., in 1951 as salesman for the state of Oregon, has been appointed division sales manager for the northern half of the country and all of Canada. George C. Lichty is manager of the southern half of the U.S.

E. L. Priestman is now director of industrial engineering for Atlas Plywood Corp., Boston. Another appointment was that of **Kenneth M. Ford** as business research director.

Richard H. Marsh has been promoted to Worksaver and Warehouser sales manager by Yale & Towne Mfg. Co.,

WHELAND
6" and 8"
LOW MILL
AIR NIGGER

With its companion Wheland Log Stop and Loader,
ELIMINATES HAND LOADING AND TURNING OF LOGS!

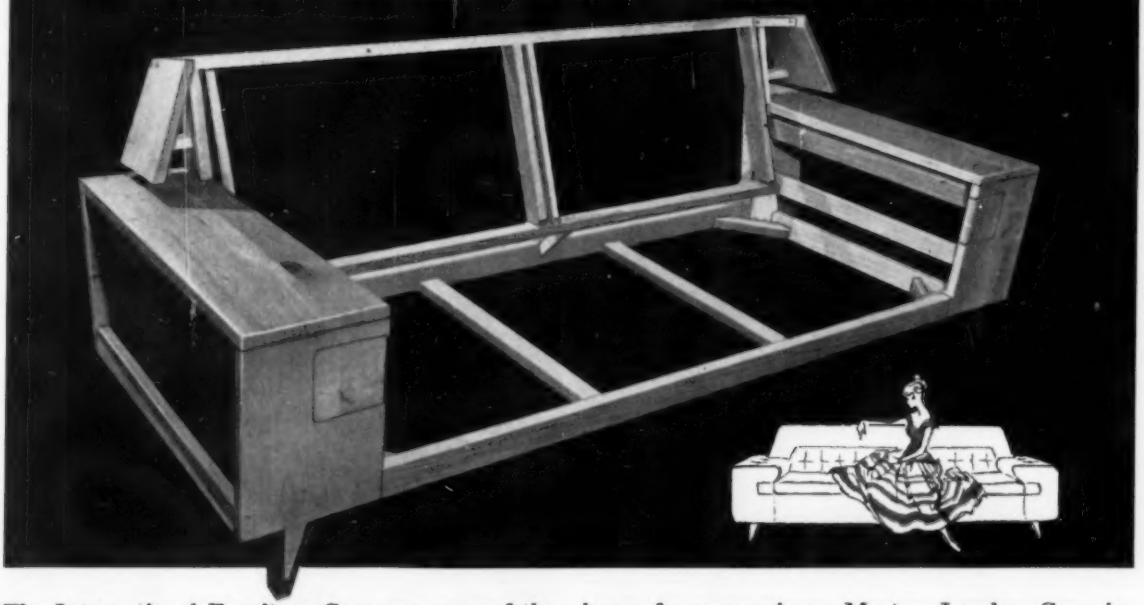
FULL OSCILLATING • EASILY HANDLED • QUICK ACTING

Compact—requires only 5' 3" depth. Especially suited for small mills and light carriage use. Air Operated. Rugged construction. Non-rusting hard brass cylinders with machined steel heads oscillate on heavy steel trunnion. Top frame angles form horizontal bar guide. Hinged steel teeth. Long wearing chrome plated piston rods.

Write for Detailed Bulletin.

WHELAND
THE WHELAND COMPANY
CHATTANOOGA, TENNESSEE — PHONE 5-3181
MANUFACTURERS OF COMPLETE SAWMILLS AND AUXILIARY MACHINERY

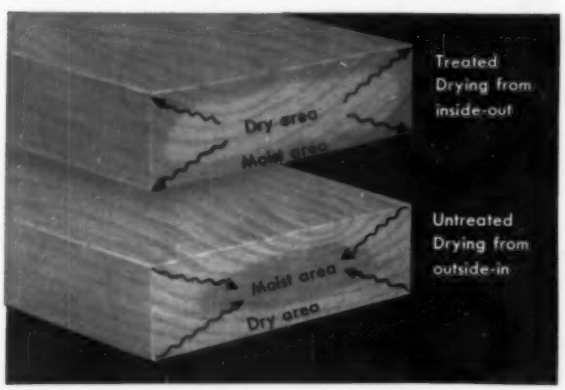
Leading manufacturers insist on Morton Lumber Cure treated lumber



The International Furniture Company, one of the leading furniture manufacturing companies, and makers of the sofa frame shown above, has been using Morton Lumber Cure treated lumber since 1948. International has found Morton Lumber Cure greatly increases yield; reduces end checking, surface checking, and tear-outs.

Hundreds of fabricators now insist on lumber that has been treated with Morton Lumber Cure. They know from experience Morton Lumber Cure increases utilization of rough cut lumber. Lumber also can be dried faster, kiln time and expense are reduced, with a more rapid turnover of inventory and capital.

What's more, Morton Lumber Cure is compatible with stain-preventing agents . . . will not affect gluability . . . machinability . . . color or finish. Morton Lumber Cure is non-toxic and non-corrosive.



How Morton Lumber Cure Works • Morton Lumber Cure reverses the normal drying action. Untreated lumber dries from the outside in. Morton Lumber Cure dries lumber from the *inside out*. This controlled drying greatly reduces checks, honeycomb, warping, and other types of wasteful surface and interior degrade.

SEND FOR MORE INFORMATION TODAY!

Bay Chemical Company
DIVISION
Morton Salt Company

120 So. La Salle Street, Dept. WWP-3, Chicago 3, Ill.

Please tell me how Morton Lumber Cured lumber can save *me* money; and what suppliers in my area have this kind of lumber.

Name_____

Title_____

Company_____

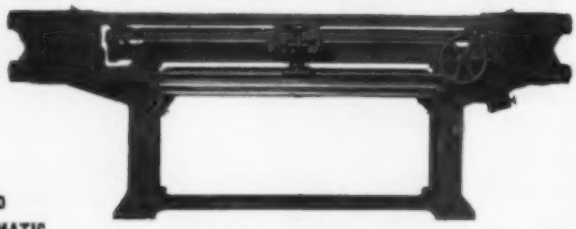
Address_____

City_____ State_____

Our plants are located at_____

_____

DEMON FOR HIGH PROFITS . . . HIGH PRODUCTION!



- HIGH SPEED
- SEMI-AUTOMATIC
- DUST-PROOF
- REVERSIBLE
- CAPACITY TO 10'8"
- FRICTION-FREE STROKER

MODEL D SINGLE-BELT SANDER

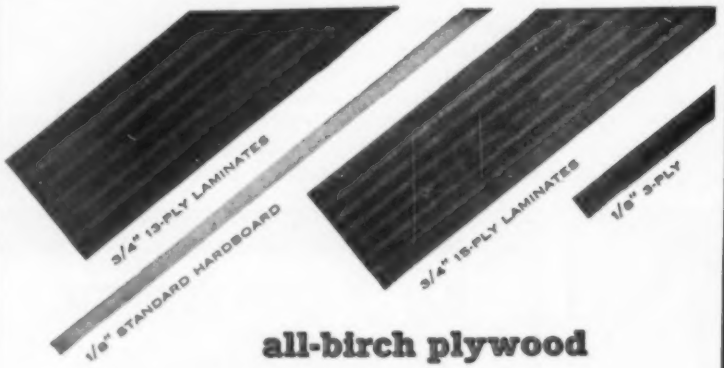
Year-in and year-out shop use continues to prove the high efficiency of Oakley quality sanding machines. Operators and owners alike depend on Oakley for the sanders and the "know-how" to get the job done . . . profitably!

MODEL D-1 SANDER & POLISHER

Positive superior quality!
Stock is ready for finishing room with a single handling! The D-1 is also reversible with double belt. Without sponging or glue sizing, it removes tape, polishes and eliminates raised grain.

WRITE FOR COMPLETE DETAILS TODAY!

The Oakley Co. SINCE 1934 — BRISTOL TENNESSEE



all-birch plywood

From the world-famous forest resources of Finland, imported all-birch plywood—sizes up to 4' x 6', all thicknesses . . . cut to size to buyer's specifications. • All-birch ¾" 13-ply or 15-ply laminates for cabinet doors, table tops, etc.; lumber core for table tops; door panels of birch plywood (¼" 3-ply). • Also standard hardboard, ⅛" thickness, with an exceptionally hard surface. • *Dependable deliveries from Finland's oldest plywood source. Quotations submitted—your inquiries invited.*

FINWOOD INDUSTRIES INC. Station Plaza, Ramsey, N. J.

Philadelphia, from his former position as assistant sales manager. Also announced was the appointment of **Fred E. Rau** as assistant hoist sales manager, a newly created post.

John D. Beggs

John D. Beggs has been appointed by National Starch Products, Inc., New York, to direct sales of vinyl resins to paint and protective coatings industries. He will also coordinate resin sales efforts to the adhesive manufacturing and related chemical specialty fields. Mr. Beggs was formerly president of Gelvatex Coating Corp., California, which he founded. Also revealed were the appointments of **Dr. A. I. Goldberg** and **O. B. Wurzberg, Jr.**, to be associate directors of research, and **Fred Eastman** as superintendent of process development.

Robert F. Gager has been elected vice-president of research for Synco Resins, Inc., of Bethel, Conn. He has been director of research since 1953.

R. M. Miller

Robert M. Miller has been appointed sales manager, Woodworking Machinery and Portable Tool Divisions, by Onsrud Machine Works, Inc., Chicago. He was formerly associated with John Oster Mfg. Co. in its sales division.

L. J. Forrest has been named assistant manager of the Northwest Timber Division of Rayonier Inc., New York. He will headquarter at Hoquiam, Wash., and report to M. B. Houston, manager at Seattle.

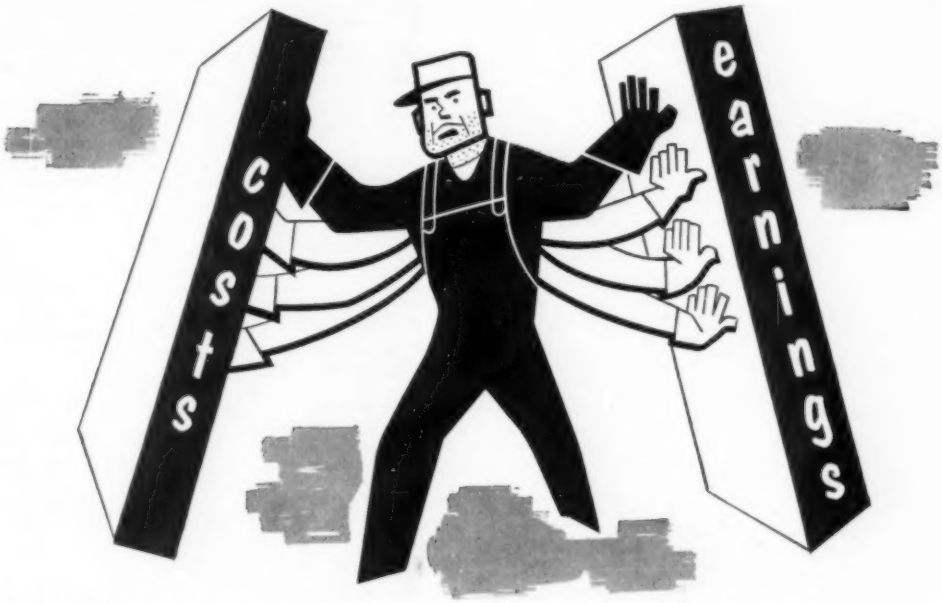
Albert C. Wedge has been named production superintendent for DeWalt, Inc., Lancaster, Pa., with direct responsibility for operation of its machine shop, assembly, motor, foundry, and production control departments.

Willis G. Scholl was elected executive vice-president of Allis-Chalmers Mfg. Co., Milwaukee, Wis., and **Boyd S. Oberlink** was elected vice-president in charge of the Tractor Group, replacing Mr. Scholl.

H. S. Mersereau has been named manager of Crossett Lumber Co., Crossett, Ark., replacing A. T. McDonough who has retired. The announcement was made by W. C. Norman, general manager of The Crossett Co., of which the lumber company is a division. Also revealed were the appointments of **Ramon Greenwood** as director of public relations for The Crossett Co., and **Lewis A. Gray** as a chemical salesman for Crossett Chemical Co.

ROUGHY

fights the squeeze between costs and earnings!

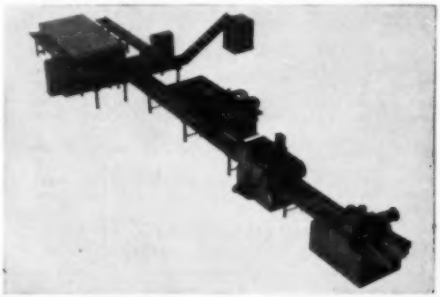


"Roughy" is a fighter with a knock-out punch for costs. "Roughy" is a wrestler who constantly wrestles that squeeze between costs and earnings. "Roughy" is the nickname for Porter-Method-Rough-Mill-Systems, a nickname used by rough mill operators who know what he can do for them.

"Roughy" is an engineer and can use his head as well as his strength in fitting the flexibility and versatility of "PORTER METHOD" Systems to each particular rough mill operation.

"Roughy" is built for service, and he's smooth. He knows how to eliminate confusion and congested areas, and how to conveyorize your operations so that many men can be freed from production lines for other work.

"Roughy" is a helpful consultant and salesman, and can present the complete story of "PORTER METHOD" Systems so that you can discover ways to save thousands of dollars each year in your own wood working plant.



To find out how "Roughy" can fight your particular squeeze between costs and earnings

use this coupon today!

C. O. PORTER
MACHINERY CO.
666 Front Ave., N.W., Grand Rapids 4, Mich.

Attention of "ROUGHY"

C. O. PORTER MACHINERY CO.
666 Front Ave., N. W.
Grand Rapids 4, Michigan

Send my copy of "More Board Feet Per Day" which tells me how to fight that squeeze between costs and earnings.

NAME _____ TITLE _____

COMPANY _____

ADDRESS _____

TRADING POST

Trading Post ads must be in publisher's office 10th of month preceding date of issue. Publisher reserves right to classify, edit, or reject ad. Space sold only in inch units x 2 3/16 in. wide. Cost $10.00 per in., cash in advance. No agency commission. 5% discount if payment made in advance for 1 yr.

WOOD & WOOD PRODUCTS
139 N. Clark St., Chicago 2, Illinois

FOR SALE

FOR SALE

HARDBOARD

1/8" x 4' x 8'

Imported from Finland

Delivery March/April

Sample On Request

Interchange of America Inc.

27 William Street
NEW YORK 5, N. Y.

FOR SALE

COMPLETE MACHINE
FOR MAKING 1 in. INSULATION
BOARD—24 in. wide.

Swanson Boat Oar Factory
Albion, Pennsylvania

HELP WANTED

PRODUCT DESIGNER

Preferably 25 to 35 years old with creative ability and a practical knowledge of millwork for research, design and development work. Company manufactures a complete line of stock millwork. Some product design experience necessary. Salary to start $4500 to $6000. In reply send complete qualifications and photo to Personnel Department, Curtis Companies Incorporated, Clinton, Iowa.

WANTED

Direct factory representative to sell plywood for Hardwood Manufacturers. Have Eastern and Western territories open. Good opportunity for right person. Write box A318, Wood & Wood Products.

WANTED

WANTED

Any quantity surplus and cut-off
PLYWOOD & HARDBOARD
by reliable firm. Send list and full details. Write to Box A210, c/o Wood & Wood Products.

DEATHS

Allan M. Kerr, president of Preston Woodworking Machinery Co., Ltd., Preston, Ont., died on Jan. 6, at 73 years of age. He is survived by his wife, three daughters, and three grandchildren.

Mr. Kerr became associated with M. H. Mullin and W. Murray in founding and organizing Preston Woodworking Machinery Co. in 1912. He was a director and secretary-treasurer until 1947, when he became president, succeeding the late Mr. Mullin.

Thomas E. Heppenstall, a vice-president of Long-Bell Lumber Co., Longview, Wash., died on Jan. 25, in Portland, Ore., from injuries incurred in an automobile accident.

Born in Wiarton, Ont., Canada, in 1898, Mr. Heppenstall, an electrical engineer, joined Long-Bell in 1923, became research director and head of the development department in 1928, was named assistant to vice-president and manager in 1937, chief production engineer in 1948, and was elected vice-president in charge of engineering for all divisions in 1951.

Among the many developments and patents with which he was credited are the first practical electric moisture meter, still in use, and a lock joint for securing drawer fronts to cabinet work without use of nails.

Active in the West Coast Lumbermen's Assn. and Western Pine Assn., Mr. Heppenstall was also a member of FPRS and on the advisory board of Washington State Institute of Technology. He is survived by his wife, Cecile; son Robert of Longview; and daughter Mrs. David Parker, of Seattle, Wash.; and four grandchildren.

DIMENSION STOCK

ROUGH • SOLID • GLUED UP • SEMI-FINISHED AND FINISHED

Angelina Hardwood Sales Co.

P. O. Box 1020
Lufkin, Texas

Manufacturers of: Furniture and Industrial Hardwood Dimension stock—SOLID or GLUED, Rough, semi-finished and completely machined furniture dimension.

Also special millwork, such as, paneling, stair treads, thresholds, base shoe, etc., etc.

Truck shipments can be made within 300 miles of our plant. We are interested in quoting on volume shipments, regular schedules. . . . We also handle MAHOGANY.

ALL ORDERS CAREFULLY MANUFACTURED TO YOUR SPECIFICATIONS

DELFAIR®
Furniture Dimension

FRAME STOCK OUR SPECIALTY—Blanks cut to your sizes or completely machined—ready to assemble. CONTACT US ABOUT YOUR NEEDS. TWX 296 Tel. 740

D. L. FAIR LUMBER COMPANY
LOUISVILLE, MISSISSIPPI

Somerville-McGinn Lumber Co.

Western Lumber Specialties

Mouldings — Jambs — Cut Stock — Ladder Stock
Glued Panels — Toy Stock — Specialties

PONDEROSA PINE
FIR HEMLOCK

Telephone Andover 3-4636
308 West Washington St. Chicago 6, Ill.

"You don't wait till you're thirsty to dig a well!"

—Old Chinese proverb

Let 'em know you're in business to stay.

Use a regular "card" in this department every month and you'll get your share of available dimension orders.

Write, wire or phone for rates.

WOOD & WOOD PRODUCTS
139 N. Clark St., Chicago 2, Ill.
Financial 6-5380

ADVERTISERS' INDEX

American Cynamid Co. 17
Armour & Co., Adhesive Div. 42-43

Behr-Manning 37
Black Bros. 39
Bostitch 53
Bradley Lumber Co. 16
Buss Machine Works 2

Catalin Corp. 63
Chapman Chemical Co. 51
Coe Mfg. Co. 49

Delta Power Tool Div., Rockwell Mfg Co. 54-55
DeVilbiss Co. 8
Diehl, G. M., Machine Works, Inc. 60-61
Dixie Mfg. Co. 40
Durez Plastics Div., Hooker Electrochemical Co. 3

Ekstrom, Carlson & Co. 56

Fastener Corp. 82
Finwood Industries, Inc. 78

Glidden Co. 27
Greenlee Bros. & Co. 83
Greenlee Tool Co. 58

Jamestown Veneer & Plywood Corp. 45
Jenkins Machinery Co., Div. Curt G. Joa, Inc. 50

Leitelt Iron Works 52

Mattison Machine Works 13
Mereen-Johnson Machine Co. 14-15
Meyers, W. F., Co. 16
Midwest Walnut Co. 69
Mitts & Merrill 68
Monsanto Chemical Co. 29
Moore Dry Kiln Co. 10
Morton Salt Co., Bay Chemical Div. 77
Muskegon Machine Co., Inc. 47

Northfield Foundry & Machine Co. 38

Oakley Co. 78
Oliver Machinery Co. 70

Pacific Mutual Door Co. 12
Perkins Glue Co. 84
Plywood Service, Inc. 71
Porter, C. O. Machinery Co. 79

Radial Cutter Mfg. Corp. 36
Radio Receptor Co., Inc. 4
Rogers, Samuel C., & Co., Inc. 44

Saranac Machine Co. 66
Schrader's Son, A. 74
Simonds Saw & Steel Co. 31
Smith, A. O., Corp. 65
Smith, H. B., Machine Co. 41
Smith, R. L., Lumber Co. 44
Southco Div., South Chester Corp. 69
Southern Hardwood Co. 72
Stanley Works, Steel Strapping Div. 46
Stem, Chester B., Inc. 35
Supreme Woodworking Machinery Corp. 48

Taylor, James L., Mfg. Co. 62

U. S. Plywood Corp. 75
Universal Door Carrier, Inc. 48

Victor Supply Co. 28

Walker-Turner Div., Kearney & Trecker Corp. 9
Wallace, Don B., Inc. 70
Westinghouse Electric Corp., Sturtevant Div. 73
Weyerhaeuser Sales Co., Industrial Wood Parts Dept. 64
Particle Board Dept. 59
Wheland Co. 76
Whitney, Baxter D., & Son, Inc. 18
Williams-White & Co. 57
Woods, S. A., Machine Co. 6
Woodworking Machinery Mfr.'s Assn. 11

Yates-American 67

WHERE TO BUY

WOOD TURNINGS

AUTOMATIC LATHE

Furniture City Dowel Co.
503 Grandville Ave.
Grand Rapids 3, Mich.

Grand Rapids Dowel Works
701 W. Burton St.
Grand Rapids, Mich.

H. G. Winter & Son
Kingfield, Me.

•

CUSTOM TURNINGS

American Bobbin Co.
Lewiston, Maine

Amyx Manufacturing Co.
648 Missouri Ave.
West Plains, Mo.

Moser Furniture Co.
409-413 Fifth St.
Lynchburg, Va.

•

DOWEL RODS & PINS

Furniture City Dowel Co.
503 Grandville Ave.
Grand Rapids 3, Mich.

Grand Rapids Dowel Works
701 W. Burton St.
Grand Rapids, Mich.

Saunders Brothers
Westbrook, Me.

•

EXTERIOR LAMP POSTS

A. F. Schwerd Mfg. Co.
3215 McClure Ave.
Pittsburgh 12, Pa.

•

HANDLES

Allen-Rogers Corp.
Laconia, N. H.

The Stratton Co.
Stratton, Me.

H. G. Winter & Son
Kingfield, Me.

•

IMPREGNATED WOOD SPECIALTIES

Paramount Oilless Bearing Co. Inc.
99 Hope Ave.
Worcester 3, Mass.

KNOBS—WOOD

Allen-Rogers Corp.
Laconia, N. H.

F. D. Peters Co., Inc.
21-51 Foster St.
Gloversville, N. Y.

The Stratton Co.
Stratton, Me.

H. G. Winter & Son
Kingfield, Me.

•

LARGE WOOD TURNINGS (FURNITURE)

Carrick Turning Works
812 Millis St.
High Point, N. C.

•

OILLESS WOOD BEARINGS

Paramount Oilless Bearing Co. Inc.
99 Hope Ave.
Worcester 3, Mass.

•

SELF-LUBRICATING BEARINGS

Lignum-Vitae Products Corp.
97A Boyd Ave.
Jersey City 4, N. J.

•

SELF-LUBRICATING PULLEYS, ROLLERS, WHEELS, ETC.

Lignum-Vitae Products Corp.
97A Boyd Ave.
Jersey City 4, N. J.

•

SPECIAL TURNINGS

H. G. Winter & Son
Kingfield, Me.

•

WOOD SPOOLS & REELS

H. G. Winter & Son
Kingfield, Me.

TOY PARTS (Turned & Shaped)

Bogert & Hopper, Inc.
101 W. 31st St.
New York 1, N. Y.

F. D. Peters Co., Inc
21-51 Foster St.
Gloversville, N. Y.

A. F. Walker & Son Inc.
New Ipswich, N. H.

H. G. Winter & Son
Kingfield, Me.

•

TURNINGS—GENERAL

Geo. F. Adams & Co., Inc.
Moscow, Vt.

Allen-Rogers Corp.
Laconia, N. H.

American Bobbin Co.
Lewiston, Maine

Boss Whipple Mfg. Co.
Fourth Ave. & South St.
Union City, Pa.

Levenson Woodturning & Mfg. Co.
3755 S. Broadway Place
Los Angeles 7, Calif.

Paramount Oilless Bearing Co. Inc.
99 Hope Ave.
Worcester 3, Mass.

F. D. Peters Co., Inc.
21-51 Foster St.
Gloversville, N. Y.

The Stratton Co.
Stratton, Me.

A. F. Walker & Son Inc.
New Ipswich, N. H.

Wisemiller's Turning & Mfg. Co.
Coldwater, Mich.

H. G. Winter & Son
Kingfield, Me.

Van Stee Corp.
Jamestown, N. Y.

•

WOOD PARTS TO ORDER

Bennett Lumber & Mfg. Co.
20 Carlton Avenue
Zeeland, Mich.

Curry Wood Products
260 W. Broadway
New York, N. Y.

Furniture City Dowel Co.
503 Grandville Ave.
Grand Rapids 3, Mich.

Grand Rapids Dowel Works
701 W. Burton St.
Grand Rapids, Mich.

Holgate Bros. Co.
Kane, Pa.

•

WOOD PORCH COLUMNS

A. F. Schwerd Mfg. Co.
3215 McClure Ave.
Pittsburgh 12, Pa.

If you manufacture Wood Turnings, your firm name should be listed on this page. The cost is nominal. For further information write today: WOOD & WOOD PRODUCTS, 139 N. Clark St., Chicago 2, Ill.

See how DUO-FAST Automatic STAPLE TACKERS can save you TIME AND MONEY!

DUO-FAST AIR TACKERS — for production work on case goods, cabinets, and other woodwork products.

DUO-FAST STRIKE TACKERS fill the bill for many tacking jobs.

DUO-FAST SUPER-POWER AIR TACKER is "the answer" to many sash and millwork problems.

DUO-FAST HAMMER TACKER makes fast work of tacking backing for display.

MANY OTHER USES

Write for complete details on the time and money saving DUO-FAST STAPLE TACKERS.

FASTENER CORP. 860 Fletcher Chicago 14

For his contributions to the advancement of the wood industry . . .

Wood Salutes

CLAY BROWN

One of the wood industry's finest leaders is a gentleman who looks more like a midwestern businessman than a lumber baron. He is Clay Brown, 53, president of big M and M Wood Working Company, plywood, door lumber, plastics and wood tank and pipe producer.

About a year ago Mr. Brown became the first non-family president to take the helm of M and M. For a man whose chief hobby is working there couldn't have been a better choice. Indeed his appointment was a mutual arrangement in which both the company and Mr. Brown figured they were getting full value. He is a man who gives an assignment and tells the recipient that there is no hurry about it. Five minutes later he is back to see what has been done. In today's fast-moving wood industry such executive intensity is bound to make progress.

Clay Brown's path of progress started at the bottom of the heap many years ago. The hiring boss at Long-Bell Lumber Co. in Longview, Wash., couldn't have known that the well-set youngster he put on would one day be one of the giants of the industry. He started in the planing mill as a laborer and by his natural intelligence was drawn to the office and the invoice desk. He went up from there.

Not too many years later he joined M and M, for the first time, and became its sales manager. It should be noted here that Mr. Brown has an innate sense of promotion, not on the picayune scale but on the grand scale. In his early executive years he was one of the founders of the Douglas Fir Plywood Association, of which M and M is one of the main supporters.

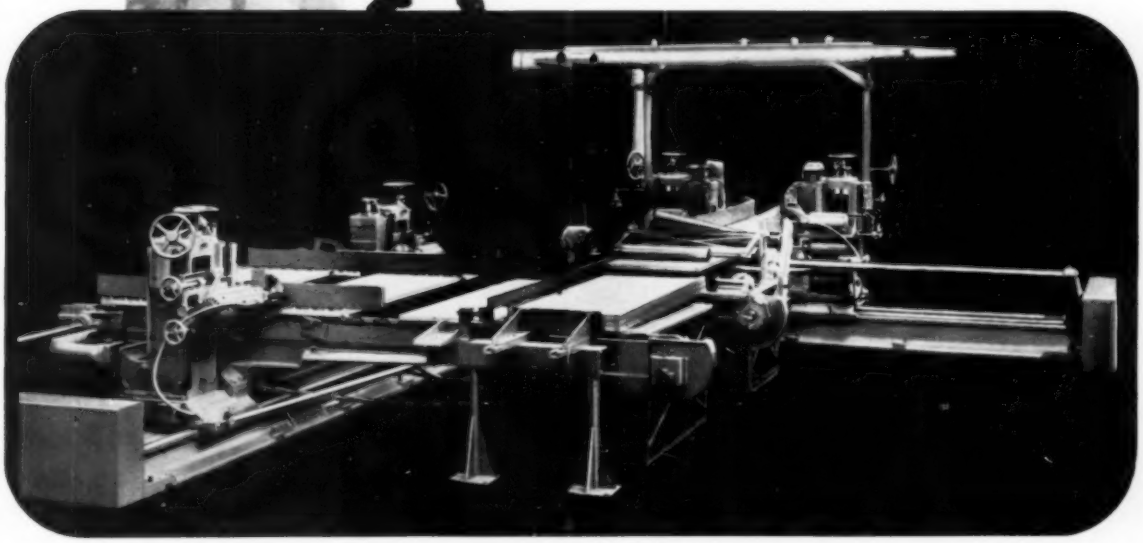
Leaving M and M he joined the Ralph L. Smith Lumber Co. as a spruce buyer. As seems his wont, it was not long before he became manager of the Portland, Ore., planing mill. In 1937 the Smith company, in concert with some other people formed Smith Wood Products, Inc., and constructed a plywood mill at Coquille, Ore. Mr. Brown was made mill manager and lived for a time in Coquille before moving the sales and administrative offices to Portland, a more accessible contact point.

This second junket into the plywood world and his demonstrated ability led to his next step up. He became assistant to the president of United States Plywood Corp. in 1943, working in New York City and residing at Bronxville, N. Y. He rose to vice-president and member of the executive committee. Two years later he moved "back home" and formed Clay Brown & Co. in Portland, a lumber brokerage. In 1946 the company organized Humboldt Plywood Corp. at Arcata, Calif., and sold it in 1948. In 1949 it constructed a sawmill at Fortuna, Calif., which was sold two years ago.

Aside from demonstrations of good management and excellent human relations, Clay Brown's biggest contribution to the wood industry to date has been his leadership in urging the industry to promote itself. There is still a great portion of the wood industry which scoffs at self-promotion, yet competitive products are springing up on every hand. In helping form the DFPA, in practicing an open, long-range look toward promotion in his own company, and as a director of the West Coast Lumbermen's Association, he has done much to prove to the industry that awareness of the outside world can pay off.

UP TO 8 DOORS PER MINUTE

automatically sized, eased, and cut off . . .



. . . using Greenlee No. 542 Door Machines equipped with an automatic transfer unit

V-chains and tracks on the GREENLEE No. 542 are machined of special non-metallic material to eliminate lubrication and wear problems while assuring cutting accuracy. Top easing units float on guide rollers to automatically compensate for varying door thicknesses. Special chip removal system in transfer unit prevents marring of doors in the hopper or under the rollers.

MACHINERY & TOOLS
GREENLEE

Here's the quick way to step up door production schedules, assure product accuracy, save labor—and better your profit picture. With this GREENLEE assembly in your plant you can automatically size, ease, and cut off nearly 500 doors an hour! Doors are first fed into the GREENLEE No. 542, shown at right above, for sizing to width and easing edges. GREENLEE Transfer Equipment then automatically conveys the work to the adjacent GREENLEE No. 542 for cutting off to length . . . eliminates need for two men normally required at this handling point. End result is high-speed production *on a most accurate basis* to put your plant in an outstanding position for meeting today's highly competitive conditions. Why not let us tell you the complete story on this profit-making GREENLEE equipment . . . write today.

GREENLEE BROS. & CO., 1713 TWENTY-FIRST AVE., ROCKFORD, ILL.

PERKINS GLUE COMPANY
LANSDALE, PENNSYLVANIA

PERKINS GLUE COMPANY
HIGH POINT, N. CAROLINA

PERKINS GLUE COMPANY
SHAWANO, WISCONSIN

PERKINS GLUE COMPANY
WEST MEMPHIS, ARKANSAS

PERKINS GLUE COMPANY
KITCHENER, ONTARIO

PERKINS GLUE COMPANY
LA CHUTE, QUEBEC

Everything for

WOOD GLUING

UREA-FORMALDEHYDE RESIN GLUE

PHENOLIC RESIN GLUE

RESORCINOL-PHENOL RESIN GLUE

FORTIFIED UREA RESIN GLUE

VINYL RESIN GLUE

CASEIN GLUE

VEGETABLE GLUE

PREPARED HIDE GLUE

VENEER & CORE REPAIR COMPOUND

GLUE ROOM SPECIALTIES

MIXERS · SPREADERS · BRUSHES

P
PERKINS GLUES